```
(without alignments)
6678.212 Million cell updates/sec
                                                                                                                                January 17, 2003, 18:15:29 ; Search time 3708.55 Seconds
                                                                                                                                                                                                                                                                1 MPPKTPRKTAATAAAAAABP............851
Copyright (c) 1993 - 2003 Compage Ltd.
                                                                                         mucleue search, using trame_plus.pzn model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lotal number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                         2054640 seqs, 14551402878 residues
                                                                                                                                                                                                                                                                                                                                  Xqapop 10.0 , Xqapext
                                                                                                                                                                                                                                                                                                                                                      Ydapop 10.0 , Ydapext
                                                                                                                                                                                                                                                                                                                                                                         Fdapop 6.0 , Fdapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fost processing: Minimum Match 0% Maximum Match 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB Seq Tength: 0
Maximum DB seq Tength: 2000000000
                                                                                                                                                                                                                         US 09 526 459A-39
                                                                                                                                                                                                                                                                                                           BLOSUM6.2
                                                                                                                                                                                                                                           4 182
                                                                                                                                                                                                                      intle;
Pertect score;
                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                         M protein
                                                                                                                                                                                                                                                                  Sectionics
                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched
```

Maximum Match 1908
Matc

```
qb vi; *
cm ba: *
cm hum: *
em in: *
em in: *
                                                                                                                                                                                em_sts:*
                                                                        qb Sts:*
                                                                                   *:101
                                                                                                                                                       em pat: *
                                                                                                                                                             em.ph:*
                         *:Accide
                                             * * *
2 2 2
2 3 4 4
                                                                 dp ro:*
              ab htq:*
                                                                              ab sy:*
                                                                                                                                         *:10 mo
                                                                                                                                               em, oy:
                                        qb, part : *
                   # Fur qb
       qb ba:*
GenEmb.1:*
full abuse :
```

em vi:∗	em ht⊄_hum:*	em_hig_inv:*	em_htq_other:*	em_htg_mus:*	em_htg_pin:*	em_htq_rod:*	em_htg_mam:*	em_ht.q_vrt:*	*: ys., me	em_htqo_hum:*	em_ht.go_mus:*	em_htgo_other:*
29:	30:	31:	3.2:	:: *	34:	3.5:	36:	. 47 :	 æ	:64	:04	4 1 :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Result No.		VACOUC				
	Score	Match	Match Length	БВ		beset iption
21 ~		98.9	2994	ي د	AR091965	ARGUIST STREET
~	1 1 1 .	58.	2994	9	ARUSBIRS	
	333.	98.4	2994	9	AR207831	ARZU7B31 Sequence
4	4333.5	98.9	2994	æ	RD009728	BD009728 Tissue sp
~،	333	98.9	2994	ç	I81465	Sequence
œ			2994	5	HUMRBSA	MZ8419 Human retin
7	333.		4600	J	HUMRHAÌRA	M43647 Human retin
œ	3.4.3.		4839	÷	AX 430701	AX 440701 Sequence
5	33.3		4839	5	HUMKBIMKNA	L41870 Homo Sapien
<u></u>	323.	78.7	2995	œ	AR144797	AR144797 Sequence
Π	4290.5		4597		105411	105.411 Sequence 1
11	· · · · · · · · · · · · · · · · · · ·	 	:- * * * *	ŗ.	HUMBES	M. 100 Buman retin
~	4283.5	97.8	4597		109369	109369 Sequence 1
₹.	4213	96.1	3232	ت	AR072031	AK672031 Sequence
5	4213	96.1	3232	ن	AR072032	AKC72032 Sequence
4) F1	4213	96.1	3232		118496	118476 Security e 1
1.7	4213	36.1	3838		118497	N LOCAL CONTROL
18	4176.5	95.3	4580		A01444	A01444 H. Sapiens D
5.	3964	3.06	(65)	ψ	1112560	Charles ANCO Cable
20	3956	90.3	4591	2	MUSPPlusem	M.F.44 Monse retin
2.1	1872.5	88.4	4432	0	KA K	V2523 Ref 108
22	3279	74.8	17 17 77 17 17 17 17 17 17 17 17 17 17 17 17 17 1	u^	GURETINE	TOTAL STATE OF THE
53	3270.5	74.6	1456	L^	000113	1100 Entle Calle
54	2643.5	6.0.3	2808	u^	NVRET I NRF	YOUNG N. VITTORES
25	2581	58.9	1554	4	AF230742	AFZ (0742 Canis tam
9 (1	2421.5	55.3	3386	u^	AFT02861	AFIGZBS OUTOUT DATE
C1	2209.5	5.0.4	27.40	u `	AY008285	ATCORERY OF VEIGS
38	1011	24.1	944	L^	AY125075	AY125075 banio rer
53	793.5	18.1	4863	10	MMU27177	U27177 Mus musculu
30	792	18.1	3235	10	MMU 4 4 4 2 0	U44420 Mus musculu
3	790	18.0	3460	5	нимет 07в	14812 Human retin
32	7	18.0	4130	Ç	AX281827	AXZHIBZ7 Sequence
33	769.5	17.6	4.503	Þ	BC032247	BCC42247 Homo Sapi
*	768	17.5	2808	5	HUMP107A	M74547 H. Sapiens r
35	764	17.4	2808	φ	AR078225	ARCZB225 Sequence
3.6	763	17.4	3448	Ġ	S67171	S67171 Rbr 2-retin
3.7	761	17.4	4909	5	BC034490	RC044490 Homo Sapi
38	756.5	17.3	4853	ۍ	ARU 38697	ARU3H697 Sequence
5	756.5	17.3	4853	Q	AR059584	ARUS9584 Sequence
0	756.5	17.3	4853	5	HSP130K	X76061 H.sapieus p
41	745.5		3249	ĵ.	115011	Il'soll Sequence 1
7 7	745.5		3249	ې	124436	124446 Sequence 1
4 }	745.5	17.0	3249	5	RSRB2P130	X74594 H.sapiens m
44	721	16.5	4861	1.0	D55627	D556.27 Rattus norv
4.5	718	16.4	4013	0	0,40% EMM	The sum sum of Miles

ALIGNMENTS

RESULT 1

SEP-2000		20 198 30 258	30 318 30 37 30 438	
ar PAT DA-			4 4 4	
nna linea sor and regula	2004 : 851 ative: 0 hes: 77		GACCTROCTCOTTCATCATCATTTAACTTTCAAAAAAAAAA	ATCTGIATCTITATTGCAGCAGTTGACCIASAGACGCPPHCThrPhcPhcPhrGluicu ATCTGIATCTITATTGCAGCAGTTGACCIASATGAGATGGAGTTGACTTTTACTGAGCTAGATGAGATG
2994 bp 1.0% 598134. 19 B.P. -07-BEC-1999 11fiers Ruown, sq4 q gene	Length: Matches: Conservat Mismatche Indels: Caps: Caps:	SThraladlathr AACGGCCAGC DProGlu IIIIII	YTTRAARAAGA ICATGTCAGAGAG	HASPIGUASPGIU FGACCTAGATGAG HISTYSPROPPO CALLILIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
AR091965 AR091965 AR091965.1 GI:10018719 Unknown. Unknown. Unknown. Unknown. Unknown. Unknown. Unknown. Unklown. Unklown	1.13e-314 4.83.50 91.70% 91.70% 98.89% 6		CCTCAGGCTTCACAGACAGACAGACAGACAGACAGACAGA	TATTGCAGCAGT
Ç	Month Stores: No. 1 Our Similarity: Local Similarity: Match: Out5-459A-39 (1-86			
ARCED STATE OF THE CONTROL OF THE CO	According to the design of the			y y y y y y y y y y y y y y y y y y y

```
1519 CTTAAATCAGAAGAAGGAITAICCAIICAAAAAIIITAGGAAAGTICIGAATGACAAC 1578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1099 TACGAAGAAATTTATCTTAAAATAAAGATCTAGATGCAAGATTATTTTGGATCATGAT 1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1339 AITICCIATITIAACAACIGCACAGTGAAICCAAAAGAAAGTATACTGAAAAGAGIGAAG 1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1579 ATTTTTATATGTCTTTATTGGCGTGCGTCTTGAGGTTGTAATGGCCACATATAGGAGA 1638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1699 CITAAITIAAAAGCCITTGATTITIACAAAGIGAICGAAAGITTIAICAAAGCAGAAGGC 1758
224 AcmSerLeadlyLeaValThrSerAsnGl,LeaFradluValGluAsnLeaSerLysArg 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         384 LouiysSerCluCluCluCluArgicuSerTlcCluAsaPheSetLysLouicuAsaAspAsa 403
                                                                                                          284 AsnLeuAspGluGluValAsnValIleProProHisThrProValArgThrValMetAsn 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    304 ThrileGlnGlnLeuMetMetLleLeuAsnSerAlaSerAspGlnProSerGluAsnLeu 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    244 AspileGlyTrilePheLySGlutysPheAlaLysAlaValGlyGluGlyCysValGiu 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              404 IlePheHisMet.SerLeuLeuAlaCysAlaLeuGluValValWetAlaThrTyrSerArg 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                424 SerThrSerGlnAsnLeuAspSerGlyThrAspLeuSerPheProTrplleLeuAsnVal 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    464 AsnLeuThrArgGluMetIleLysHisLeuGluArgCysGluHisArgIleMetGluSer 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       484 LeuAlaTrpLeuSerAspSerProLeuFheAspLeuIloLysOlnSerLysAspArqGlu 503
                                                                                      164 \ {\tt ThrAlaValIleProIleAsnGlySerProArqThrProArgArgGlyGlnAsnArgSer} \ 183
                                                                                                                                                                                                                 919 GCACGGATAGCAAAACAACTAGAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAA 978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         504 GlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuProLeuGluAsnAsnHis 523
                                                                                                                                                                      184 AlaArqileAlaLysGlnLeuGluAsnAspThrArqileileGluValLeuCysLysGlu
                                                                                                                                                                                                                                                           204 HisCluCysAsnlleAspGluVallysAsnValTyrPheLysAsnPhelleProPheMet
                                                                                                                                                                                                                                                                                                                                                                                                                             264 LysThrLeuGLnThrAspSerIleAspSerPheGluThrGlnArgThrProArqLysSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      324 HeSerTyrPheAsnAsnCysThrValAsnProLysCluScrilcLcuLysArqValLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         364 IleglyserSlaArgTyrLysLegSlyValArgLeuTyrTyrArgValMetGluserMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  444 LeuAsnLeuLysAlaPheAspPheTyrLysValIleGluSerPheileLysAlaGluGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1219 AAAATTGATGAAGAGGTGAATGTAATTGCTGCACACACTGCAGTTAGGAGTGTTATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ਜੂ
ਹ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         , oy
                                                                                                                                                                                                                                                                                                                                                                                     ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                              ď
                                                                                                                                                                                                                 QO
                                                                                                                                                                                                                                                                                                   Бb
                                                                                                                                                                                                                                                                                                                                           ;;
;;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Οÿ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
```

Ę	6,6H1	GGACCAACHGATTTTTTTTTTTTTTTTTTTTTTTTTTTTT	1938
5 5	524	Thrataalaaspihet TyrkeiserProVatarqserProLystystystysetybtThr 1 	543 1998
5 g	1,544	Tathr Ser Alaphe Clurhr Clulys Statistics (ALTHILLI IIII)	563 2058
5 E	564	ystysvaltyrargioualatyrieu 	583 2118
5 É	584	Thriantysoluarda-uienserolulisprodluleuolulis Ilefle - ELLELELELEH HELLEH HELLEH HELLEH HELLEH HELLE AGACH GEAAAGOELGIGGAGGAGGAAALAGAGATAFGAG	603 2178
\$ <u>\$</u>	6.04 21.79	CLOHESTALLOUGHASAGUNIYGUNEUMCI AFGASPATGHESLOU TITTILLI HITTILLI HITTILLI HITTILLI HITTILLI CAGCACACACACACACACACACACACACACACACACACA	623 2238
5 8	5.24	ret met cysset met fyrgfyllecyslysvall.ysasrifeaspleeilys 	643 2298
5 8	544	JysaspleolproffisalaVald1631vfhrPheLys -	663 2358
5 3	664 2359	g – g	683 2418
5 G	684 2419	<u>⊢</u> – ∢	703 2478
5 3	704	g — <u>H</u>	723 2538
5 8	7.24	0-5	743 2598 ·
25 27	744	> ∪	763 2658
5 3	764		783 2718
\$ 3	784	□ - ≤	803 2778
5 5	804 2779	Tua taaspatysertysitisteurrodtystusertysiskotingtistysistys of the second secon	
5 g	H 24	S	843 2898
5 3	28.39	ASPTH 18 OF ASPT 48 ASPT 4	
ARD38	11.1 18.18.9		

```
PAT 14 FEB 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                144 CysValleuAspTyrPhelleLysLeuSerProProMetLeuLeuLysGluProlyrLys 164
                                                                                                                                                                                                                                                                                                                                                                                                              84 LeuPheSerLysLeuCluArqThrCysCluLeuTleTyrLeaThrGlnDroberSerTot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      104 IleserThrGluIleAsnSerAlaLeuValLeuLysValSerTrpIleThrPheLeuLeu 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        124 AlaLysGlyGluValLeuGlnMetGluAspAspLeuValIleSerPheGluLeuMetLeu 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    259 GACCIGCTCTCGCTCAGCTICAGITIGAAGAAAAAAGAAGAAGAACCIGAITIIACIGCAIIA 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           379 GTTTCATCTGTGGATGGAGTATTGGGAGGTTATATTCAAAAGAAAAAGGAACTGTGGGGA 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.
                                                                                                                                                                                                                                                                                                                                                                                            1 MetProProLysThrProArqLysThrAlaAlaThrAlaAlaAlaAlaAlaAlaGluPro 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----ValAspleuAspSluMetSerPhethrPhethrGluLeu 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  44 GlnLysAsnileGluIleSerValHisLysPhePheAsnLeuLeuLysGluIleAspThr 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64 SerThrLysValAspAsnAlaMetSerArqLenLeuLysLysTyrAspValLeuPheAla 84
 Linear
                                                                                                                                                                                                                                                                                Matches:
Conservative:
Mismatches:
                                                                                                          1 (bases 1 to 2994)
Antelmon.D., Gregory.R.J. and Wills,K.N.
Retinoblastoma tusion polypeptides
Patent: US 6074850 A 3 13 JUN 2000;
 VN≏
                                                                                                                                                                                                                                                                                                                                                                                                                                                   21 ProAlaProProProProProProGlu-----
                                                                                                                                                                                                                                                                    Length:
                                                                                                                                                                                                                                                                                                                        indels:
Sequence 3 from patent US 6074850.
                                                                                                                                                                                                                                                                                                                                                                US-09-026-459A-39 (1 851) x AR098189 (1:2444)
                                                                                                                                                                                1, .2994
/organism-"unknown"
                                                                                                                                                                    Location/Qualifiers
                                       AR098189.1 GI:12807446
                                                                                                                                                                                                                                                                 1,130-314
                                                                                                                                                                                                             618 c
                                                                                                                                                                                                                                                                                            91.70%
                                                                                                                                                                                                                                                                                                         91.70%
98.89%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . . . . . . . . . . . . . . 0 %
                                                                                              Unclassified.
                                                                                                                                                                                                                                                                                                            Best Local Similarity:
                                                                                                                                                                                                            974 a
                            AR098189
                                                                    Unknown.
                                                                                 Unknown
                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                         Ouery Match:
                                                                                                                                                                                 Source
          DEFINITION
                                                                                 ORGANISM
                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                   Pred. No.:
                                                                                                                         AUTHORS
TITLE
                                                                                                                                                     JOURNAL.
                          ACCESSION
                                                                                                            REFERENCE
                                       VERSION
KEYWORDS
                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                         RIGIN
                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ó
                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                        <u>q</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
```

			•															
858	183 918	203	223 1038	243 1098	263 1158	283 1218	303 1278	323 1338	343 1398	363	383 1518	403 1578	423 1638	443 1698	463 1758	483 1818	503 1878	523
733-1GGCOTGACTATTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	184 ThrālaValileProileAsnGlySerProArgThrProArgArgGlyGlnAsnArgSer 1111 H.H.H.H.H.H.H.H.H.H.H.H.H.H.H.H.H.H.H	184 ALAAFGILOATALYSSINICSGINASSBARTATGILCITOCINVALLOUCYSLYSCIS TITTETTETTETTETTTTTTTTTTTTTTTTTTTTTTT	204 HESGERYSASELLICASPGEUVALLYSASSYALTYFPECTYSASEPPECTERFOPPEMECT - FELLELLITELLITELLITELLITELLITELLITELLITE	224 AsnSerLenglyLeuValThrSerAsnGlyLeuProGluValGluAsnLeuSerLysarq 	244 [YrG]nblollefyrleniysAshiysAsparabaAlabigleaethelrauasphisAsp 	201 (781hr) euglinthraspsertteaspserbegluthrgtnargthriproargtysser (111111111111111111111111111111111111	284 AsnieuaspalualuvalasnvaltieproproHisthrProvalArgthrValMetAsn 	304 thrifeGinGinicoMetMetIleicuAsnSerAlaSerAspGinProSerGiuAsnico 	124 LESer tyr PheasnashCysthrva LashProLysGt User Let eutysargvalltys 	44 AspiledlytyrilePhelysGluLysPheAlaLysAlaValGlyGlyGlyGluLGluL 111111111111111111111111111111111111	** 4 FieGlySerGlnardlyrlysleuGlyValargleuTyrTyrargyalmetGluSermet 	ved inculysserGlublubludraficuseriiteBludsupheserLysteuteudsnaspasn 	4.94 TTPPheffisMetSerLeutLeuAladysAlaLeuGluValValWalMetAlaThrTyrSerArg 	424 Serthr SerginasnicuaspSergiythraspicuSerPheProfiplicicuasnVal 1311-41-41-41-41-41-41-41-41-41-41-41-41-4	444 Teudsmieutyska i gebodspedym ysya ti toch gompletterysa i 901901y 1914 - 113 HTH HTH HTH HTH HTH HTH HTH HTH HTH HT	454 AsnteuthrargdumettlelysHisleugluargCysGluHisargllemetGluser 5111111111111111111111111111111111111	484 TendialiplicuSerAspScrPtotzuPheAsptzeileiysGinseriysAspArgGiu 	5.4 Slypro:braspHisteuGluSerAlaCysProLeuAsnLeuProLeuGlnAsnAsnHis
i i	कु ब	≫ ख्	한 출	왕 4	:- <u>.</u>	रू <u>व</u>	£ 4	는 A	स् <u>व</u>	Эт. — Д	क क्	당 · 글	강 즉	ي ج	왕 골	कु कु	कु बु	ž-

```
linear FAI 20 JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2659 ACTITICAGAAATIOFAGAAATAAATAAJGSIAISIAAGAGAAGGIGIGGIGAAA 2718
2119 GGCTAAAIACACIITSIGAAGGCTICIGIGIGIGAGGCCAGAAITAGAACAIAICAIC 2178
                                                                                                                                                                                                                                                                                                      2179 TGGAGCTITITCAGGACACACTGCAGAAIGASIALGAAGICAIGAGAGAGAGATTG 2238
                                                                                                                                                                                                                                                                                                                                                                     2479 CCAAIACCICACAIICCEOSAAGCCITACAAGIICCIAGIICCIAGIICCI 25.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2539 GGAGGGAATCTATATTTGACCCTGAAGACCAIAIAAAATTCAGAGGGGGCA 2598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          724 CiyolyAsnileTyrileSerProLedysSerProTyriys LeSerGluclyLeaPro 743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               524 ThralaalaaspMetTyrLeuSerProValarqSerProLysLysLysLysClySerThrThr 543
                                                                                             544 ArgValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAlaPheGlnThrGlnLys 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            664 ArgvalLeu13cLysGLuCluCluTyrAspSer11e11e11ev1preAspSerValPhe 683
                                                                                                                                                         564 ProLeuLysSerThrSerLeuSerLeuPheTyrLysLysValTyrArqLeuAlaTyrLeu 583
                                                                                                                                                                                                                         584 ArgLeuAsnIhrLeuCysGluArgLeuLeuSerGluHisFroGluLeuGluHisIleIle 603
                                                                                                                                                                                                                                                                                       604 TrpThrLouPhoGlnHisThrLeuGlnAsnGluTyrGluLcuMetArgAspArqHisLcu 623
                                                                                                                                                                                                                                                                                                                                                                                                               644 PhetysIleIleValThrAlaTyrLysAspLeuProHisAlaValGluGluThrPheLys 663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           684 MetGlnArgLeuLysThrAsnIleLeuGlnTyrAlaSerThrArgPreProThrLeuSer 703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         704 ProlleProHisIleProArgSerProTyrLysPheProSerSerProLeuArgllePro 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   764 ThrSerGluLysPheGlnLysIleAsnGlnMetValCysAsnSerAspArqValLeuLys 783
                                                                                                                                                                                                                                                                                                                                                     624 AspClnIleMetMetCysSerMetTyrGlyIleCysLysValLysAsmIleAcpLeuLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     744 ThrProThrLysMetThrProArgSerArgIleLeuValSerIleGlyGluSerPheCly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2719 AGAAGIGTIGAAGGAAGGAACTOTICIAAACAAGAAAAAAGITIGATAIIGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         824 LeuAlaGluMetThrSerThrArgThrArdMetGlnLysGlnLysMetAsnAspSerMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2994 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2899 GATACCTCAAACAAGGAAGAAA 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         844 AspThrSerAsnLysGluGluLys 851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AR207831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
.
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       G
D
                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ĉ
                               ó
                                                                                             ò
                                                                                                                                                         ò
                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                       ζ
                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               òγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

EFINITION PCESSION ERSION	Sequence AR207831 AR207831	4 from patent 0.	18 6479927.	•
EYWORDS OURCE ORGANISM	Unknown. M Unknown.			
EPERENCE AUTHORS LILLE JOURNAL	Unclassit 1 (bases Antolman, Retinobla Patent: D	Unclassified. [(bases L to 2994) Anredoman.b., Gregory, R.J. and Wil Retinoblastoma fusion profesus Patent: US EXPACA?? A 40-App-204 Fortent: US EXPACA?? A 40-App-204	. and Wills,K.N. otens in-Any-2002;	
SOUL COUNT	cre T 974 a	/organism-"unkn 618 c 59	וביוס וסשמו 13 q 809 t	
N N N N N N N N N N N N N N N N N N N				
liqument red. No.	Scores:	1,136,314		
core: creent S est Loca nery Mat	cores: ercent Similarity: est Local Similarity mery Match: Es	4 4 4 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5	8 itive: 0 ies: 0	
S 09 026	459A-39 (1	- 39 (1 B51) × ARZ07831	. (1 2994)	
7.	Met Proproby	/SThr ProArqLysth	MorteroProtySThrProArqLysThrAlaAlaThrAlaAlaAlaAlaAlaAlaAlaAlaBluPro	20
b 149		MANCCCCCCCGAAAACC	GGCCGCCGCCGCCGCCGCCGCGCGCGCGCGCCC	198
γ 21	ProAlaProPr	OPEOPEOPEOPE	ProAlaProProProProProGlu	3.0
b 199		tanadadadadanad	II GAGGAGGAGCGAGAGGAGGACAGGGGCGGGGAG	258
y 10	:			3.0
b 259	Ž.	CCCTCAGGCTTGAGTT	CCGCCTCTCGCGCCTGAGTTTGAAGAAACAGAAGAACCTGATTTTACTGCATTA	318
γ 40				3.0
413	Ξ	AAAGATACCAGATCA		378
y 40		:		3.0
t: / }	CHICAGO	GGALGGAGTATTGGG	TOTENDA LONANTA LI COGGAGOTTA LA LA TICAAAAGAAAAAAGGAACTIG LOGGGGA	4 38
7 41		. ValAs	najngangangangangangangangangangangangangan	4 .
t, 4+9	ATCTGTATC.14	TALIGONGCAGIIGA	WCCIAGAIGAGAIGTCGTTCACTTTACTGAGCTA	498
y 44 b 499			OTHERSASTER TO THE PROPERTY SPINOR OF STATEMENT SOLD HOSEPTHY THE PROPERTY SOLD HOSEPTHY THE PROPERTY SOLD HOSEPTHY THE PROPERTY SOLD HOSEPTHY THE PROPERTY SOLD HOSEPTHY	63 558
¥ 64		1] AspAsuA JaMet Se	orArq Leu Leu Lys Lys Tyr AspVal Leu Phe Ala	ž
695 4		IGALAATGGTATGTG	ATTACCAAAGT CATAAA COTATCTACACOTTO TOTACAAAGTATGATGTATTGCTT GCA	819
у 84 b 619		rsteugluargibicy -	LeutheserLysLeudluArgThrcyscluLeulleTyrLeuThrcluteroserSer 	103 678
7 104		outieAsnSerAlate	uValleutysValser frpllerhrPheleuteu	123
th 679		AAFAATTOTGOALT	ATA FOTA CTOAND FOR A TROUGH OF THE STATE OF	7.38
7 124 b 789		IuVallæuGlaMetGl IIIIIIIIIIIIIII AAGIAIIAGAAAIGGA	Alatysolysluvalleuslometsluaspaspleuvallleserphesloleumetten IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	143
7 144		epTyrPhelleLysLe	CysVal LauAspTyrPhetile LysLeuserProproMet LeuLeuLysG uProTyrLys	163

```
979 CATGAATGTAATATAGATGAGGGGAAAAAAGTTTTATTGAAAAATTTTATAGGTTATGT 1038
                                                                                                                                                                                                   224 AsnSert.cuGlyt.caValThrScrAsnGlyt.caProGluValGluAsh.cuScrLysArg 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    344 AspileClyTyrilePhetysClutysPheAlatysAlaValGlyGlnGlyCysValGlu 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  384 LeutysSerGluGluGluArqLeuSerlleGluAsnPheSerlysLeutzeuAspAsn 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1519 CITAAAICAGAAGAAGAACGATIAICCAIICAAAAIIIIAGCAAACTICTGAAIGACAAC 1578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          404 IlePheHisMetSerLentLentLaCysAldLenGluValValMetAlalhrlyrSerArg 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  424 SerThrSerGlnAsnLenAspSerGlyThrAspLeuSerPhoProTrpIleDeuAsnVal 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          444 teuAsni.cutysAlaPheAspPheTyrtysVallTedTuSerPheTfeTysAlaChuGTy 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    464 AsmiculhrAngGluMetilenysHisLeuGluAngCysGluHisAnglleMetGluSer 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1759 AACTTGACAAGAGAAAIGATAAAACATITAGAAGGAIGIGAACATGGAAIGATAAAATOT 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       484 LeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysGlnSerLysAspAraGlu 503
                                                                                                    164 ThralaValifeProffeAsnGlySerProArgthrProArgArgSlyClnAsnArgSer 183
                                           799 IGTGTCCTTGACTATTTAATTAAACTCTCACCTCCATGTTGCTCAAAGAACCATATAAA 858
                                                                                    184 AlaArqIleAlaLysGluLeuGluAsnAspThrArqIleIleGluValLeuCygLysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           324 HeSerTyrPheAsnAsnCysThrValAsnProLysCluSerTleLeuLysArqValLys
                                                                                                                                            204 HisGlaCysAsnileAspCloVallysAsaVallytHthalysAssaMallatraMat
                                                                                                                                                                                                                                                              244 TyrGluGlulleTyrLeuLysAsnLysAspLeuAspAlaAraLeuFatauAspHisAsp
                                                                                                                                                                                                                                                                                                                     264 LysThrLeuGluThrAspSerTLeAspSerPhedluThr@luArq1hrProArq1ysSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq.
••.
                                                        qq
                                                                                    >
C#
                                                                                                                                            \ddot{c}
                                                                                                                                                                      q
                                                                                                                                                                                                     ò
                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                   οğ
                                                                                                                                                                                                                                                                                                                                               Ω
                                                                                                                                                                                                                                                                                                                                                                             δŏ
                                                                                                                                                                                                                                                                                                                                                                                                     d
                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \overset{\circ}{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      습
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ===
```

uy 544 Ft 1999	Argva IAsnser Thralaasna lagturhrdinalarhrsera laphedinthrdintys 563 - Hilli Hilli 3016 AAAI ICIACI GCAAA FOCAGAGACAAAGGAACGT CAGACT FCAGAGACAAAA 2058	·
uy 564 lit. 2559	ProLeubyssorThrisorLeissorLeighefyrLysbystyfrangfouhlafyrLou 583 THEFFELLITTER HILLITTER HILLITTER HILLITTER HILLITTER SOCIACCIATOR 2118	
97 584 Db 2113	Argizenasurhrieudysdinargizenieuserdiumisprodiuizudiumisileile 603 EEEETTEHTEHTIITIITIITII SEETAAATA YETTEHAA SEETTETTAA PAASSAAATAAAAAA SAAFALE	
oy 6.34 56 2179	EE F. Comploy Bill F. Br. Common B. Common	
cy 6.4 lib 2249	ASPONINTEMAN MAYOYSSAFMAYTYEDDYILLOQYSEDSVALEYSASKILBASFLENLLYS 643 - FELLETTETTETTETTETTETTETTETTETTETTETTETTE	
95 +44 Db 27299	PholysilellevalthralaryriysaspionprodisalavalohedhaPhrehysissasa 	
cy 7 744 ab 2459	ArgvalloullelysgingludintyraspSerflettevalPheTyrasnServalPhe=683 Erffleterflittiffffffffff Gglottiffalvaaraaaaaagaavargatychargaagrattyravaagyggygtyryg=2418	
4.9 + 8.4 .tb - 24.19	Met GlobraleulystbrösnileleuglofyrblaserfbrargProProThrLeuser 703 * 1444 frittillitt	
28 704 Db 2479	Prolledformiglichtoargscrprolythyspheproscrscrprolegargilepto 723 	,
23y 7.24 Db 25.89	GlyglyasınlıcıyıllıcsorproteulysserProtyriysiloserdiuGlyheuPro 743 	
28 744 Db 2899	ThrProThrLysMetThrProArgSerArglleLeuValSerlleGlyGluSerPheGly 763 	
oy 764 pb 2659	ThrserGlutysPhecInLysTheAsnClnMetValCysAsnScraspargValLeuLys 783 	
07 784 Fb 2719	ArgsotalagibglySetaspproprolysprolopiysiyslobatapboaspilogib 803 	
γν 864 Ob 2779	GLYSSTANDIA AND AND AND SECTION OF THE STANDARD AND AND AND AND AND AND AND AND AND AN	
ОУ 824 Lb 2849	Legalight ThreathrangthrangmetchnissCinissMetasnaspSermet 843	
OY 844 0.b 2899	Aspibriserasniysgiudiuiys 851 	
RESULT 4 BD00'9728		

```
PN JP 200150305 09.2
PD 21-MAR-2001
PP 13-NOV-2001
PF 13-NOV-2001

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            259 GACCTGCCTCTCGCTTGAGTTIGAAGAAAAAAAAAAGAAACTGATTTTACTGCATTA 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 379 GITICATCTGTGGATGGATATTGGGAGGTTATATTCAAAAGAAAAAGGAACTGTGGGGA 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               84 Tenth SerlystendinArgthroysclutenticTyrtesThrGlnPreSerSerSer 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----ValAspLeuAspGluMetSerPheThrPheThrGluLeu 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MetProProLysThrProArgLysThrAlaAlaThrAlaAlaAlaAlaAlaAlaGluPro
                                                                                                                                                                          1 (bases 1 to 2994)
Antelman, D., Gregory, P.J. and Wills, K.N.
Tissue specific expression of retinoblastoma protein
Patert, JP 2001503638-A 2 21-MAR-2001,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21 ProAlaProProProProProProGlu--------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism-'Unidentitied'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualitiers
1. .2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels:

    12994
/organism-"unidentified"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-026-459A-39 (1-851) x BD009/28 (1-2994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref~"taxon:32644"
| hlm c 593 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
Н0009728
Н0009728.1 GI:18638101
JP 2001503638-A/2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.13c-314
4333.50
91.70%
91.70%
98.89%
                                                                                                                                                                                                                                                                                                                                   Unidentified
                                                                                          unidentilied.
                                                                                                                                                     unclassified.
                                                                                                                            unidentitied
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               474 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3.0
                                                                                                                                                                                                                                                                                                    CANJI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30 -----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CC CC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                      ORGANISM
                                                                                                                                                                                                             AUTHORS
TITLE
FOHFNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
      ACCESSION
                                  VERSION
KEYWOPDS
SOURCE
                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d
```

3	613	CPTTCACCAAATIGGAAAGGACATGTGAACTTATATATTTGACACAACGAGAGTTGG-678
5 3	104	Hesor thribitities ansoratal acouvatiours valsor tradicipital tradicipitation tradicipital tradicipital tradicipitation tradicipital tradicipitation tradicipitat
\$ 2	1.24	AlatyschygluvalteudlümetgluaspäspteuvallleserPhedlüteumetteu 143 Effillerifittititititititititititititititititit
5 3	144	CysVallemAspEyrPhelleLysLeuSerProProMetLeuLeuLeuLysGuProTyrLys 163
471	164	The Alava Hiller of Leasned y Ser Proar qThr Proar gar qC 1 youn as nat qSer 183
35 42	184	AlaArqfiedlabysofidendinAsnaspThrarqfletledluValLenGsbysGju 203
5 8	204 979	HischetysascileaspolevallycacoValtyrPbcLysascibeTeProPheMet. 223
0.y 13b	10.89	ASIGNATION OF THE PROPERTY OF
5 3	244	TyrdludlutleTyrLeutysAsnLysAspLeuAspAlaArgLeuPheteuAspHisAsp. 263
5 3	264	LysThrianglathraspsortleaspserPheGlathrGlaargThrProargEysSer 283
5 3	284 1219	ASTROMASPOLOGIAVATASBVALLICPTOPTOHIS DYTTOVALATQIBTVALMCTASB 803
ŝ ŝ	1275	The Herbrich of the UME THE LEGAS SECALAS SECTION PROSECTIONS OF STATEMENT THE STATEMENT OF THE SECTION OF SEC
5 2	124	The SetTyr Phe Ashardys Thr Val Ashardys Gluser Detectives Arabas 143
5 3	144	ASPITEMITTEM TO CHELS STUDINS PROPERTA SALAVALOTYCHOLINGLYCYSVALOLU 363 THE FILLER FOR THE FILLER FOR THE FILLER FOR THE FILLER FOR THE FOR TH
5 5	16.4	The dissertinary by tysteriol yvalary cury ryrary valwetoliuserwet. 383 FILLER FILLER
5 3	484 1513	LeadysSerGludludiaArabeaserIleGlaAsaPheSerbysbeuleaAsaAspAsn 403
5 3	404	Herbahismetsertagiseblacysalatogibuvaluvalmetalathriyrserang 423 Hith Hith Hith Hith Hith Hith Hith Hith
5 3	4.24	SerThrSerGinAsniceuAspSerGlyThrAspIceuSerPheProTrp11eLeuAsnVal 443
5	4 4 4	LeuAsmienitysAlaPheAspPheTyrLysVallledluSerPheTlefysAladludly 463

```
2359 CCTCTTTTGATCAAAGAAGAGGAGTATGATTCTATTATTAGTATTCTATACTTGGTCTTC 2418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2599 ACACCAACAAAAATGACTCCAAGATCAAGAATCTTAGTATGAATTGGGAALCALLCGGG 2658
                                                                    259 AACTTGACAAGAGAAATGATAAAAGATTTAGAAGGATGTGAAGALGAATGATGAAFGC 1818
                                                                                                                                                                                                                                                                                                                                                                                                                  2059 CCATIGAAATCIACCICICITICACIGIIITAIAAAAAAGIGIALCGGCIAGCTATCTC 2118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2719 AGAAGTGCTGAAGGAAGCAACCTCCTAAACCACTGAAAAAACTACGCTTTGATATTGAA 2778
464 AsntouthrargluMetiletysHisLouGluArqfysCluHisArqfleMetGluSer 483
                                                                                                                                                                        504 GlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuProLeuGlnAsnAsnHis 523
                                                                                                                                                                                                                                                                                                              544 ArqValAsuserThrAlaAsnAlaGluThrGlnAlaThrScaAlaPhecInThrGlnLys 563
                                                                                                                                                                                                                                                                                                                                                                                 564 ProtoutysSerThrSerLeuSerLeuPhefyrLysLysValTyrArgteuAlafyrLeu 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                  584 ArgleuAsmihrleuCysGluArgleuLeuSerGluHisProGluLeuGluHisllelle 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       604 TrpThrLeuPheGlnHisThrLeuGlnAsnGluTyrGluLeuMetArqAspArqHisLeu 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            624 AspCinfleMetf@ysScrMetTyrCly;ferystysVallgsAshHeAspLanlgs 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               664 ArqValLeufleLysGluGluGluTyrAspSerfleTileValPheTyrAsnSerValPhe 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      704 ProlleproHistleProArdSerProTyrLysPheProSerSerProLeuArd[LePro 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      724 GlyGlyAsmileTyrileSerProLeuLysSerProTyrLysHeSerSlusHyLeuPro 743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 784 ArgSerAlaGluGlySerAsnProProLysProLysLysLeuArgPheAsplleGlu 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    804 GlySeraspGluAlaAspGlySerLysHisLeuProGlyGluSerLysPbechaCladya 823
                                                                                                                                                                                                                                                                                                                                744 ThrProThrLysMetThrProArgSerArgIleLeuValSerIledlyGluSerPheGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              764 ThrSerGluLysPheGlnLysIleAsnGlnMetValCysAsnSerAspArdValLeuLys
                                                                                                       484 LeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysGluSerLysAspArqGlu
                                                                                                                                                                                                                                             524 ThralaalaaspMetlyrLeuSerProValArqSerProLystysLysClySerThrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   684 MetGinArgloullysThrAsnilelcuGinlyrAlaSerihrArgbrobrofhellcuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                    ò
                                                                                                                                      qq
                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ^{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \delta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                             ô
```

```
linear PAT 10-JUN-1998
                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 2994)
Shepard,H.Michael, and Wen,S.Pen.
Characterization of a novol anti-pilO sup RH monowional antibody
Patent: US 5710255 A 2 20:18A-1998.
                   2439 - COGGAGAAATGACTICFACTGGAAATGGAAAAGGAGAAAATGAATGATGGGATG 2898
B.4 LeuAladluMetThrSerThrArqThrArqMetGlnLysGlnLysMetAsnAspSerMet, 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    M4 LouPhoSerLysLeudluArqThrCysGluLeuIleTyrLeuThrGlnProSerSer 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               259 SANCISCIPLICICAGO PERAGO II GAAGAAACAGAAGAACO POATTIIACIGOATIA 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      § 18TCAGAAATTAAAGATACCAGAFCATGTCAGAGAGAGAGAGTTGGTTAACTTGGGAGAAA 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23 MILLPAIGIGIGGALGGAGIALIGGGAGGTTATTCAAAAGAAAAAAGGAAGTGGGGGA 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              439 ATCTGTATATTATTGCAGCAGTTGACCTAGATGAGATGTCGTTCACTTTTACTGAGCTA 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               44. @lutysasn1te3ln11eSerValHisTysPhePheAsnLeuteut.ysGtut1eAspThr. 63.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.09 CAGAAAAACATAGAAATCAGTGTCCATAAATTCTTTAACTTACTAAAAAGAAATTGATACC 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64 SerThrLysValAspAsnAlaMetSerArgLeuLeuLysLysTyrAspValLeuPheAla 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .....ValAspLeuAspGluMetSerPheThrPheThrGluLeu 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21 ProAlaProProProProProProGlu------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches:
                                                                                                                                                                                                      Sequence 2 from patent US 5710255.
181465
191456.1 C1:3209762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                         2994 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US:09:026-459A-39 (1-851) x I81465 (1-2994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism~"unknown"
kie o saaa
                                                                                                                                                                                                                                                                                                                                                                                                                   Localion/Qualitiers
                                                                                             2899 SATACCECAAACAAGGAAGAAAA 2922
                                                                       H44 ASPThrserAsnLysGluGluLys 851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.13e - 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4333.50
91.70%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          468.86
                                                                                                                                                                                                                                                                                                                                                                                                                                   .2994
                                                                                                                                                                                                                                                                                                                        Unclassitied.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bost Loral Similarity:
Onery Match:
                                                                                                                                                                                                                                                                                  Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                       181465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aliqument Scores:
                                                                                                                                                                                                      SULLO
                                                                                                                                                                                                                                                                                                      PERMISH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TALL STEPPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ź
                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                 THEN AL
                                                                                                                                                                                                                                                                KEYW-RUS
                                                                                                                                                 3 1 EN. EX
                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NICE N
                                                                                                                                                                                                                                                                                  王,至三次
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 700
                                                                                                                                                                                       SHOOT
                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>. . .</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
```

```
1279 ACTATICAACAATTAATGATTTTAAATTCAGGAAGIGATCAACAAAATTG 1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   979 CATGAATGTAATATAGATGAGGTGAAAAATGTTTATTICAAAAATITTATAGCTTTTATG 1038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1099 TACGAAGAAATTFATCTTAAAAATAAAGATCTAGA FGCAAGATTATTI FTGGA I CA IGA I 1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1339 ATTICCIAITITAACAACIGFAFAGAGTFFFAAAAAAAGTAIAGTGAAAAAAGAGTGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 224 AsnSerLouS!]//LouValThrSerAsnClr/LouProGluValGluAsnLouSer LysArg [24]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           384 teutysSerGluGluGluArgleuSerTleGluAsnPheSertysLeuteuAsnAspAsn 403
                                                                                                                                                                                                                                                                                                                                                                  404 HePheHisMetSerLeuLeuAlaCysAlaLeuGluValValMetAlaThrTyrSetArg 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       424 SerThrSerGlnAsnLeuAspSerGlyThrAspLeuSerPheProIrpIleLeuAsnVal 443
                                                                         104 | HeSerThrGluffeAsnSerAlaLeuValLeuLysValSerTrpHeffhrPheLeuLeu 123
                                                                                                                                                                                                                       124 AlaLysGlyGluValLeuGlnMetGluAspAspLeuValIleSerPheGlnLeuMetLeu 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     304 ThrileGinGinLeuMetMetIleLeuAsnSerAlaserAspGinProSerGluAsHeu 323
679 ATATOTACTGAATAAATTOTGOATTGGTGGTAAAAGTTTGGATGAGATGTTTTTALLA 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              184 AlaArqIleAlaLysGlnLeuGluAsnAspThrArqIleIleGluValLeuCysLysGlu 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               324 | 1686#WyFPheAshAshCysThrVa | AshBroLysCloBer | 1646#1798 | 1745 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1746 | 1
                                                                                                                                                                                                                                                              204 HischafysasnilcaspCluVallysasnValTyrPhetysasnPhethenreHerroPheMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             244 TyrGluGluIleTyrLeuLysAsnLysAspLeuAspAlaArgLeuPheLeuAspHisAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      284 AshleuAspGluGluValAshVallleProProHisThrProValAryThrValMetAsh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         859 ACAGCTGTTATACCCATTAATGCTTCACCTCGAACACCAGGGGGGAGGTGAGAAAAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        264 tysThrfecClnThrAspSerllcAspSerPhcCluThtGlnAtgThtFYCArqfysSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            364 IlealySerSlnArgTyrLysLcuSlyValArgLeuTyrTyrArgValMetGluSerMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1519 CTIAAAICAGAAGAACGAITAICCATICAAAATTIIAGCAAACTICIGAAIGAACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .ó
---
                                                                         ò
                                                                                                                                              qq
                                                                                                                                                                                                                       ó
                                                                                                                                                                                                                                                                                            £
                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                           ĉ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>q</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ĉ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ë,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O.Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \frac{q}{q}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
```

```
644 Metitharqueutys thraso Hercestletyralascetterripropropries 703
| HERTHILL HERTHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2359 OUTGITITGATCAAAGAAGGAGTATGATTCIATATATATATATATAACTGGGTCTTC 2418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2459 ACTICHGAGAAGTGCCAGAAATAAAFGAGATGGTAFGTAACAGGGACGFGTGAAA 2718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2719 AGAAGTSCTGAAGGAAGGAACCCTGCTAAACCACTGAAAAAACTACGCTTTGATATTGAA 2778
                                                                            1759 AACTEGACAAGAGAAATGATAAAACATETAGAAGGAGAAGTAFGGATGGAGGATGC 1818
                                                                                                                                                                                                                                                                                                                                                                                                         1879 GGAPONACTGA FONCOTTGNAT CENCITGEOCICTTANICITGCICFC CAGANINATCRC 1938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21.79 TGGACCCTTTTCCAGCACACOCTGCAGAATGAGTATGAACTCATGAGAGACAGGCATTTG 2238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22.39 GACGAAATTATGATGTGCGTGTATGGCATATGGGAAAGTGAAGAATATAGAGCTTAAA 2298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2539 ACAC ANCAAAALGACTO AAGALGAAGALGITAGTATGAATGGTGAATGGTGGT 2658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            624 AspointleMetMetCysSerMetTyrClytLeCystysValtysAsmilcAspLcutys 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             664 ArqValLeulleLysGluGluGluTyrAspSerIleIleValPheTyrAsnSerValPhe 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     734 FrollebroBislleProArqSerProTyrLysPheProSerSerProLeuArqILePro 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 744 Thr ProthrigsMet thr ProArdSerArd Deleuval Serifie Gly Gluser Phe Cly 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             784 ArgSerAladludlySerAsnProProLysProLeuLysLysLysLeuArgPheAspIleGlu 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       804 GTySerAsp/CtgAlaAsp/CtySerTySHistegPredCtyCluSerTySPheCtsCtnLys 823
464 AsuleothrArgiluMetileLysHisLeuGluArgCysGluHisArgIleMetGluSer 483
                                                                                                                                                     484 LeuAlaTipLeuSerAspSerProfeuPheAspLeuIleLys31nSerLysAspArg51u 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                584 AratemAsnThrienCyscluAratemTenserCluffisProclutemCluffisIle11e 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              604 TrpThrLeuPheGlnHisThrLeuGlnAsnGluTyrGluLeuMetArgAspArgHisLeu 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7.4 styrtyAsmilefyrileSerProteutysSerProTyrtysTleSerGluGlyLeuPro
                                                                                                                                                                                                                                                                                                                       504 of phrothrasphisterdiuseraldeysprotenasuleuProtenchasnasnHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      524 ThrAlaAlaAspMetTyrLeuSerProValArqSerProCystysLysOlySerThrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        '44 ArqValAsuSerThrAlaAsaAlaGluThrGlaAlaThrSerAlaPheGlaThrGluLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               764 Thr Ser GluLysPheGluLysIleAsnGluMetValCysAsnSerAspArgValLeuLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ĩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
```

```
RLYYRVMESMLKSBEERLSTONFSKLLNDNIFPMSLLACALEVVMATYSKSTSQNLDS
STEDGEPWILMVENLKAFDEYRVIESE IKAEGHLIFEMIKHERGEHT MESLAMLSD
SPLFDLIKGSKDREGPTDHESAGFPHIEJQNNHTAADMYLSPYKSFKKGSTITKVNS
TAANZEQATSARQJOKELKKSTSLEFYKKYKLAYLKENTIGERLIFFERLISPHPELEHTTUT
LFQHTLQNEYELMKDRHLDQTMMCSMYGLCKVKNTDLKFKTTVAYKDLDHAVQELFK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RVI.I KEEETUSTI VEYNSVEMUKLIKI NII JOYASTRIPITLISPI DHI PRSPYKEPSSPI.R
I POGNI VI SPILKSPYKI SEGLIPITI KMI PHSELILVSI GESEGI SEKEQKI NOMVONSD
RVLKRSAEGSNEPPKPI, KKI, PPOTJEGSPEPAJAGSKII, PAFESKE<sub>V</sub>OKI, AEMI STPTPMQKQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LETAAVDIJDEMSETETETJOKNI ELISVÄNEENIINE TOTSTAVDNAMSKIJIKKYDVILEA
LESKI ERTTEL (YTTOFSS) STETNSALVI KVSMI 1ETTAGEVI OMEDDIJVISTOL
MLOVIDYFIKLSPEMILKEFYKTAVIPINGSPRTPRKGONRSAKTAKOLENDTRITEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOKEHEON LDEVANVYEKNE LEEMNSLALVI SNGLPEVENLISKRYEETYLKNKOLDAR
LELDHOKTI OTOS LOSEET OKT PRKSNLOEEVNV LPPH LPVKTVMNT LOGLMM LINSA
SDQPSENL LSYENNCTVNPKES LIKRVKDLOY LEKEKFAKAVGGG-VELGSOKKLOV
                                                                                                                                                                                                                                                             PRT 12 JUL 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lee, W.H., Shew, J.Y., Hong, F.D., Sery, J.W., Donoso, L.A., Young, L.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /translation "MPPKTPRKTAALAAAAAHDPAHPPHPPHPPHPPHPDHPU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VRUEFERTEERING ALCORUK LIPLERKERAMULWEKVSSVINIVILATY LOKKKELMOTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota, Metassa, Chordata, Craniata, Vertebrata, Euteleostomi;
                        824 LeuAlaGluMetThrSerThrArgThiA:aMetsNihlysONetAsuAspSerMet 843
                                                                                                                                                                                                                                                                                        Human retinoblasioma susceptibility protein mkNA, complete eds
                                                                                                                                                                                                                                                                                                                                                               refinoblastoma protein; retinoblastoma susceptibility protein.
Homo sapiens retinoblastoma cDNA to mRNA.
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /map-"Xp22.42:Yp11.3"
/cell_line-"retinoblastoma cell line Y79, and normal
retinoblastoma cell line"
/tissue_!Ype-"retinoblastoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The retinoblastoma susceptibility dene encodes a nuclear phosphoprotein associated with DNA binding activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Znote-"retinoblastoma succeptibility protein"
                                                                                                                                                                                                                                                                Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'onservative:
                                                                                                                                                                                                                                                                HKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    809-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /protein_id="AAAA69808.1"
/db_xret="G1:19096.3"
/db_xret="GDB:G00:120-184"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             indels.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nature 429 (6140), 642-645 (1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                          2444 bb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref."taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              593 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                     2899 GATACCTCAAACAAGGAAGAAAA 2922
                                                                                                       844 AspThrScrAsnLysGluGluLys 851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bookstein, R. and Lee, E.Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KMNDSMDTSNKEEK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /codon_start ·
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /dene-"MIC2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene-"MIC2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 2994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4433.50
91.70%
91.70%
98.89%
                                                                                                                                                                                                                                                                                                                                       M28419.1 GT.190962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .2925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    618 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . 2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88014238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 574
                                                                                                                                                                                                                                                             HUMKHSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3657987
                                                                                                                                                                                                                                                                                                                 M28419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ouery Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHUNT
                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           deab
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                       HUMRRSA
                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score:
                                                                                                                                                                                                                                                             1.0001
                                                                                                       ò
```

US-09:026-459A-39 (1-851) x HUMRBSA (1:2994)

		West for . On the representation of the factor of the fact	9
			198
54	7.7	ProAlaProProProProProGlu	30
-	-	CONTROL FOR THE FORM THE FORM THE STATE OF T	258
٠.,	40		3.0
-	254	SACCTOCTOTOGICAGGOTTGAGTTTGAAGAAACAGAAGGCTGATTTACTGCATTA	318
	Ţ.		30
	÷	: GTCAGAAATTAAAGATACCAGATCATGTCAGAGAGAGAGTTTGGTTTAAGATTTGGGAGAAA	378
	÷		3.0
-	4.2.4	-STITCATCTGTGGGATGGAGTATTGGGAGGTTATATTCAAAAGAAAAAAAA	438
٠,,	~	ValAspleuAspGluMetSerPhe"hrbhe"hrGluLeu	43
	च	ALCIGIA: TTIATIGCAGCAGTICACCTACATGAGATGTCGTTCACTTTACTGAGCTA	498
·	7 2	31 nTgsAshTlant10119SetVA1H18T ysPhePheAsh1e0Le0LysG1uI1eAspThr 111111111111111111111111111111111111	63 558
	4,4	SerThrib;sValhopAsaAlaMetScrArqLostCeuLystysApyrAspValLeuPheAla	83
3	5 2	ASTANCAAASTTSATAATSTTATCTCAASACTETTGAASAASTATSATTGTTTGCA	618
٠	1 2	Louphysertystical turngthr CysGlutou LeTyr Louthr Ginproser Ser Ser Ferrard Committee	103
		CLUTACANA ANATHANANANANANANANANANTIATATATATATATATATANANANTIANANANAN	9/Q
s. a	679	TEST INCOLLECTION OF A CASE OF THE STATE OF	123 738
Sec. 1.	124	124 AlaliysGlyGluValLeuGluMetGluAspAspLeuVallleSerPheGluLeuMetLeu	143
ter :	114	Pysvall.cuAspTyrPhelleLysLeuSerProProMetLeuLeuLysGluProTyrLys	163
cs.	f. 6. ;	IGEGECTEGACIATITATIAAACTCICACCTCCCATGITGCTCAAAGAACCALALAAA	æ 2æ
· 0		ThralaVal11eProI1eAsnGlySerProArgThrProArgArqGlyGlnAsnArqSer - - - - - - - - - - - - - - - - - - -	183 918
S	184	AlaArqileAlaLysGluLauGluAsnAspThrArqileIleGluValLeuCysLysGlu 	203
		GCRESSON TROCKNINGSANGLING ORDER TO PROTOS TATER TO TO THE TO THE STANDARD TO	0 6 6
· 5	4.76	SECTION OF THE SECTIO	1038
584	77.7	Aspserterallyte-vValThrSerAspSlyteaProSluValGluAsnLeusertysArg	
ے	1.143	AAT ROLET ROBACTTICTAACATCTTAATGGACTTTCCAGAGGTTGAAAAGAAAA	1098
> £	244	TyrchechenletyrLeunysAselysAspLeuAspAlaArgLeuPbeLeuAspHisAsp 	263 1158
·	26.4	LysthrieuGinthraspScrileaspScrPhcGiuthrCinargthrproArgiysScr	283
۵	1159	CTTCAGACTGATTCTATAGACAGTTTTGAAACACAGAAACACACAC	1218

2178 1339 ATTTCCTATTTTAACAACTGCACAGTGAALGCAAAGAAAGIALACTGAAAAGAGGGGAGTGAAG 1639 AGTACATCTCAGAATCTTGATTCTGGAACAGATTTGTCTTTCCCATGGATTCTGAATGTG 1698 1759 AACTTGACAAGAAATGATAAAACATTTAGAAGGATGIGAAGATGGAAICATGGAAICC 1818 1219 AACCITGATGAAGAGGTGAATGTAATTGCFGCACACAGTGCAGTTAGGACTGLIALGAAC 1278 1279 ACTAICCAACAATIAAIGAIGAITTIAAATICAGCAAGIGAIGAACCIICAGAAAAICIG 1338 483 1999 CGTGTAAATTCTACTGCAAATGCAGAGACACAAGCAACCTCAGGCTTCCAGAACCAGAAG 2058 363 604 TrpThrLeuPheGlnHisThrLeuGlnAsnGluTyrGluLeuMetArgAspArgHisLeu 623 304 7brileGinGinLeametMetlleLeuAsnSerAlaSerAspGinProSerGinAsnLeu 423 484 .cualaTrpLeuSerAspSerProLeuPheAspLeuTleLysGlnSerLysAspArqGlu 503 584 ArgLeuAsnThrLeuCysGluArgLeuSerGluHisProGluLeuGluHisIleIle 604 644 PheLysIleileValThrAlaTyrLysAspLeuFroHisAlaValSlnGlnThrFheLys 663 284 AsnLeuAspGluGluValAsnVallleProProHisThrProValArqThrValMetAsn 344 AspIleGlyTyrIlePbetysGluLysPheAlaLysAlaValGlyGlnGlyCysValGlu 504 GlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuProLeuGlnAsnAsnHis 384 LeulysSerGlüGlüGlüArgleüSerlleGlüAsnPheSerlysLeuleüAsnAspAsn 404 IlePhellisMetSerLeuLeuAlaCysAlaLeuGluValValMetAlaThrTyrSerArg 424 SerThrSerGinAsnLeuAspSerGlyThrAspLeuSerPheProTrpileLeuAsnVal 464 AsnLeuThrArgGluMet.IleLysHisLeuGluArqCysGluHisArgIleMetGluSer 524 ThrAlaAlaAspMetTyrLeuSerProValArqSerProLysLysLysGlySerThrThr 544 ArgValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAlaPheGlnThrGlnLys q (δ 검 Š qq ò ò op ò q Ś <u>q</u> $Q \underline{Y}$ d $^{\circ}_{2}$ 5 ò 5 ò qq οy 3 ò \overrightarrow{q} ò g õ 3 ò δ ŝ

```
4600 kp mENA linear PEI 12-JUL-1995
M83647 J02994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    braft entry and computer-readable copy of sequence for [1] kindly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bukaryota: Metazoa: Chordata: Graniata: Vertebrata: Euteleostomi:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Friend,S.H., Horowitz,J.M., Gerber,M.R., Wanq,X.F., Bogenmann,E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             264 ThiseiGlubysPhedInbysTleAsnGlumetValCysAsnSerAspArgValleubys 783 、
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              704 Proffebroffis HebroardScreedyrdystachsersk Projekaarg Hebro 723
HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELL
242) (SAATASP PROFFSAASSON TADAAG FISCHANTICAG STEANGAFICOT 2538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25.59 (COMMONDAMENTERFERENCE FERENCE FERENCE FOR A FRANCE FOR SANGER SEGMENTER FERENCE FOR SANGER SEGMENTER FERENCE SEGMENTER FOR SANGER SEGMENTER FERENCE SEGMENTER FOR SANGER SEGMENTER FERENCE SEGMENTER FERENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2179 GGAT AGATGAAGCAGATGAAAGTAAAATATGCCCAGGAGAGTCCCAAAATTTGAGCAGAAA 2838
                                                                                                                                                                                                                                                                                                2459 COTOTITICATCAAACAACACACTATCATTCTATTACTATTCTATAACTCCCTCTTC 2418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    744 ThithrofhilysMetThiProArdSerArdTleLeuValSerTleGlyGluSerPheGly 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Deletions of a DNA sequence in retinoblastomas and mesenchymal tumors: organization of the sequence and its encoded protein Proc. Natl. Acad. Sci. U.S.A. 84 (24), 9059-9063 (1987)
                                                                                                                                                                                       664 ArqValLeurHeLysGluGluGluTyrAspSerHeHelleValPheTyrAsnSerValPhe 683
                                                                                                                                                                                                                                                                                                                                                                                                                                   684 Met Glin Arqueulys i brasii le LeuGlin fyr Alaser Thr Arq Pro Pro Pur Leuser 703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        724 GlyGlyAnniloTyrileSerProLenLysSerProTyrLysileSerGluGlyLeuPro 743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         784 ArqSerAlaGluGlySerAssProProLysProLeuLysLysLeuArqPheAspileGlu 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HITTH 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Manumalia: Entlarta; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 4600)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (clone: p4.7R) cDNA to mKNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               provided by S.H.Friend, 10-FEB-1988.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /ordanism="Homo sapiens"
/db xrot="faxon:9606"
/map="19414.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zeell type-"retinoblast"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZB99 GALACHTELLITITE FILLI ZB92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       844 AspThrSerAsuLysslashulys 851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Li, F. P. and Weimberg, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone."p4.7R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  retinoblastoma protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /dene-"RBI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G1:190945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Home Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          M 3 4647. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 88097427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34 HD5 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROVISE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HUMKBALRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 46.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         H. DNEMERS A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         THAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDI INE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STIMES
                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \bar{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
```

```
YITATES AT TON-"MPPK TPKKTAALAAAAAPEPPAPPPPPPPPPEDPEGDEGGSGPEDLET VRLEFEET EEPDFTAD OKT KTENIVELIMENVSSVI-VVD-VALGEKKELIMEN TETAAVOLDEMSTETTET GKN TETSVIKFENIL KEITH STKVIVAAMSELLKKYVVATA LESKLEMTOELLY LESKLEMTOELLY LESKLEMTOELLY SEVILAMEN TETAAVOLDEN VALUE KRISTAMALALA TANDA NA TANDA VALUE KRISTAMALA TANDA NA TAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TANAETOATSAFOTOKITIKSTSILSILFYKKÜYRLAYLIKILITEKILISPHPELIHITIKU
LEGHTIONETEIMKOKEILIJOIMMESMYÖLTKVKNITEIKER LIVTAYKILIHAVOELER
RVLIKEEEVOSTIVPYNSVFMORLKINILIJYASTIKPPILSPIPHITPRSPYKFPSSPLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IPGGNIYI SPLKSPYKI SEGI PTETRMIPPSP II VSTOLSFGI SEKTORINOMYNSO
RVLKRSAEGSNPPRPLKKLREDI EGSDFADGSKIIL GGESKELOKI AEMTSTFTEMOKO
KMNUSMPT SUKLEK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LELDHDA LIQUOS TOSE ELOM PERSNI DEEVNVI PPHI PVRI VMNT LOGEMM LENSA
SDOPSENI TSYENNCTVNPRES LIKEVKDI GYTEKEREARANGGGCVELGSQEYKLGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RLYYRVMESMLKSEEEKLS LONFSALLINNIE HMSLLACALEVVMALYSRSTSONLDS
GTDI SPPWII NVI NLKAFIPPYRVLFSPIKAEGNLTPEMIKHE FPOPHFIMFSI AWLSIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SPLFDLIKQSKOREGPTDELESACHINLFLONNELAADMYLSPVRSPKRKGSTTRVNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           124 GACCTGCCTCTCGTCAGGCTTGAGTTTGAGGAACAGAAGAACAGATGATTTACTGCATTA 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         £6.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               864 CAGAAAAAAAATAGAAATGAGTGCCATAAATTGTTTAAGTTAGTAAAAAATTGATAGC 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              84 LeuPheSerLysLeuGluArgThrCysGluLeuIleTyrLeuThrGluProSerSerSer 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ្
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44 GlnLysAsnileGluffeSerValHisLysPhoPheAsnLeuLeuLysGluffeAspfhr 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              184 TGTCAGAAATTAAAGATACAGATCATGTCAGAGAGAGAGGGTGGTTAACTTGGGAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Znote-"retinoblastoma-associated protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              815 q 1454 t
                                                                                                                                                                                                                                          /db_xret-"GDB:G00-118-744"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US:09-026-459A-39 (1 851) x HUMRHAIRA (1:4600)
                                                                                                                                                      /protein_id="AAA69806.1"
/db_xref="G1:190946"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  :sdpg:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21 ProAlaProProProProProProGlu-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.04e-314
4333.50
                                                                                                                             /codon_start
                                         /qene-"kB]"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  842 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91.70%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        86.86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1489 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aliquinent Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
SOU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q(i ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ę,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    òγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
```

학생	1.4 Thesermostulle 	leAsmSerAlaLe-vValLeuLysValSerTrpIleThrPheLeuLeu 	123 603		qq .	
	24 AldLysclyGluVal Littlillillilli 4 GCTAAAGGGGAAGTA	yGluValleuGinMetGluAspAspleuVallleSerPheGinLeuMetLeu 	143 663		0 <i>y</i> .	•-
	(44 SysVallenAspTyr (111111111111 64 IGIGCCHGACTAI	TYTPhelletysteuserproprometiculysclubrofyttiys 	163 723		Q Q	-
	ThrAlaValile 	olleAsnGlySerProArgThrProArgArgGlyGlnAsnArgSer FELLITTETTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	183		0.;. Dp	-
		A LAAFATTO ALALES SETILE UCCTUAS EN BASTO ATTO TO TOCTUVATION CYSTYS CTU- TOTO TOTO TOTO TOTO ATTO ATTO ATTO ATTO	203 843		oy Dp	_
	204 HisolufysAsnile Filtifillilli 644 PAIGAAIGIAAIAIA	CASEGIUVA LysasnVa Tyrphelysasnbelleprophemet 	223 903		Oy Dp	~
	224 ASBSETLEGGIJJEGGVALTHESE THEFTHEFTHESE 384 AATGICHTIGGACTIGTAACATC	ValThriserasnii), Leubroii uvaliiluhen Leuser Lysarq 	243 963		op o	-
	244 Probacioniciya (TILLECHILLE) 964 IACGAAGAAATIAI	yriculysasniysaspicuaspalaargicubhcicuaspHisasp 	263 1023		ch cy.	.7.
_	Lysthra. Hillfil AAAACIC	euGInThrAspSerlleAspSerPheGluThrGlnArgThrProArgLySSer 	283 1083		o q	7
	284 AsnLeuAspGluGlu 	UGLUVALASNVALILEPFOPFOHISTÅFPFOVALAFGTÄFFVALMETASN 	303 1143		oy do	24
_	<pre>iv4 hrtlogludluLeu </pre>	The Hosting Intermet Heronas Serala Seraspoin Prosectivas nico	323 1203		oy op	64
	44 HosertyrPheasnaseCyst HTHTHHHHHHHHH E.4 ATHODIALTHACAACHGCA	ASSCJSTELVATASNPTCLJSSCTUSETTTCLGSUJJSATAVATITTTTTTTTAAAAAAAAAAAAAAAAAAAAAAAA	343 1263		cy Op	2
_	AspIl GALAI	eGIYTYr fleBhcLyoGluLysPbeAlaLysAlaValGIyGlnGlyGlySValGlu i i i i i i i i i i i i i i i i i i i	363 1323		ć qa	~
	ed HeGlyserGlmardfyrtysLouGlyva HillfillHHHHHHHHHHHHH ed AliganfynfakGGATACAACTIGGAGT	TYTLYSLOUGLYVALAEGLOUTYTTYFARGVALMOEGLUSCFMOE 	383 1383		Oy. Db	. •
_	Lenly (1111) CliAA	SSCTGTUGTUGTUATGLEUSCTTTCGTnASNPHOSCTLYSLEULGUASNASPASN 	, 403 1443		y du	~
_	4-4 IlePheHisMetSer HIIIIIIIIIIII 444 AHIHIGATAIGE	et Ser Leu Leu Aladys Ala Leuglu Val Val Mer. Ala Thr Tyrser Arg 11 11 11 11 11 11 11 11	423 1503	•	c,	. 🗟
	424 SerThrSerGInAsn (HILL) (HILL) (504 AGIACAFCICAGAAI	SerfhrserGlnasnleuaspserGlythraspleuSerPheProfrpHeleuasnval	443 1563	·	6 d	
_	LouAs 	oroutysalathorythysvaltledruserblettetysalathdly 	463 1523		0 6%	
	4 AsnLe	uMetileLysHisLenGluArqCysGluHisArglleMetGluSer	œ		ò	

```
1684 CITGCATGGCTCTCAGATICACCTTTATITGATCIATIAAACAATCAAAGGACCGAGAA 1743
                                                                                                                                                                                                                                                                                                                                                                                                                              1864 GGIGTAAATICIACIGCAAATGCAGAGACAAGCAAGCICAGGCIICCAGACCAAGAAG 1923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2104 GACCAAATTATGATGTGTTCCATGTATGGCATATGCAAAGTGAAGAATATAGACTTAAA 2163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2464 AGAGGAAAAATGAGAGAGAGAGAGAGAGTTAGTAGTAGGATTGGTGAGTGGGG 2523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2164 TICAMAMICATIGIAACAGIATACAAGATETTEETEATGETEATGAGGAGACATICAAA 2223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2524 ACTICIGAGAAGTICCAGAAATAAATCAGAIGGIAIGIAACAACGACGACGIGIGGIAAAA 2583
                                                                        624 AspGlnIleMetCysSerMetTyrGlyIleCysLysValLysAsnIleAspLeuLys 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     824 LeualaGlumetThrSerThrargThrargMetGlpLysGlbLysMetAsphare 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             564 ProLeuLysSerThrSerLeuSerLeuPheTyrLysLysValTy1AigLeuAlaTyrLeu 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             584 ArgLeuAsnThrLeuCysGluArgLeuLeuSerGluHisProGluLeuGluHisIleIle 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            644 PheLysileileValThrAlaTyrLysAspLeuProHisAlaValGlnGluThrPheLys 663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           704 ProlleProBislieProArgSerProTyrLysPheProSerSerProLeuArgllePro 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           724 ClyGlyAsallcTyrflcSerProLeuLysSerProTyrLyslleSerCluClyLeuPro 743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         744 ThrProThrLysMetThrProArgSerArg1leLeuValSerIleGlyGluSerPheGly 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         764 ThrSerGluLySPheGlnLySIleAssGlnMctValCysAsnSerAspArqValLeuLys 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          804 GlySerAspGluAlaAspGlySerLysHisLeuFrcGlyGluSerLysPhcGlaGlaLyc 823
                                                                                                                                                                         504 GlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuProLeuGlnAsnAsnHis
                                                                                                                                                                                                                                                                       524 ThrAlaAlaAcpMetTyrLeuSerFroValArqSerFroLysLysLysGlySerThrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1984 OGGYTAAATACACTITGTGAAGGCTTCTGTGTGAGCACCOAGAATTAGAACAATAACAA
                                                                                                                                                                                                                                                                                                                                                                            544 ArgValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAlaPheGlnThrGlnLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        684 Met.GlnArqLeuLysThrAsnIleLeuGlnTyrAlaSerThrArqProProThrLeuSer
```

÷	2704	CHORPAGAALGACHELIACHCGAACACGAAAAGCAGAAAATGAATGALGGATAGCATG 2763	<u> </u>
5 di	844 2764	ASPTHESATASTE, 471 4.11 4.11 1.11 1.11 1.11 1.11 1.11	
AX 4 40 701 Locuts Decits DEFINITION ACCESSION VERSION KEYWORDS	AX 440 ZO DEFINATION OFFINATION VERSION KEYWORDS		-,
30000 30000 30000 30000	ORCANISM	homban. 4 Homo Sapiens Enkarydaa, Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi; Mammalia; Entheria; Primates; Catarrhini; Hominidae; Homo.	
AUT L	REFERENCE AUTHORS FITLE	Volumb, P.E., Auquistus, M., Carter, K.C., Ebner, R., Endress, G., Horrigan, S., Supper, D.R. and Weaver, Z. Cancer gene determination and therapeutic screening using signature	· •
JOHRNA FEATURES SON	JOHRNAL ATHRES SOUTCE	Aprint: WP 0194629 A 1210 13-DEC 2801; Avalon Pharmarcuiticals (US)	
BASE O	FNIBOT NI	1534 a	-
Aliqum Pred. Score: Percen Best L guery DB:	Alignment Fred. No.: Score: Fercent Si Hest Local Sucry Matc	Alignment Scores: 2.18e (14 Length: 4839 Fred. No.: 4334.50 Matches: 851 Ference: 4334.50 Matches: 851 Ference: 50.05 Matches: 0 Frest Loral Similarity: 91.70% Matches: 0 Frest Loral Similarity: 91.89% Indexes: 1	•
11S 109	470-4	459A 39 (1 B51) x AX330701 (1-4839)	
45 24 25	_ ± _	Mot Protrolys that troat drysThraidaliaThraidaliaalidalidalidaliden 20 	
\$ 6 2 4	1.58	ProAlabroProProProProProProGlu	
	=	08	
40	2.78	258 GACCTODOCTIONS PORGCTIONGITTGANGAAACAGAAAAAACACTGATITLIACIGCATTA 317	
: S	÷ ÷	90	-
7.0	. ⊋		
=	4.7.B	GLELPATCEGGGATGGGAGTATTGGGAGGTTATATTGAAAAGAAAA	
5	<u>-</u>	ValAspieuAspiluMet SerPhechr PhethrGluicu 43	
40	4 X	ATCHGIATCHTATTGCAGCAGTAGTGAGTGAGTGTGGTGTGTTTTACTGAGCTA 497	
S 2	44	GINEGSABILICOTO FICSCYVALBISEQSPICCOLCOURGISSCIO FICASPINE 63 	
\$ 5 2	6.4 8.5.8	SerThriysValAspAsnAlaMet SerArqia-aLeaLysLysTyrAspValleaPheAla 83 	

```
BERTHILLER HELLER HELT HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1638 AGTACATCTCAGAATCTTGATTCTGGAACAGATTTGTCTTTCCCATGGATTCTCAATGTG 1697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1098 TACGAAGAAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTATTTTGGATCATGAT 1157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1338 ATTICCTATITIAACAACTGCACAGTGAATCCAAAAGAAAGTATACTGAAAAAGAGTGAAA 1397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1458 ATTGGATCACAGGATACAAACTTGGAGTTCGCTTGTATTACCGAGTAATGGAATCCATG 1517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1158 AAAACTCTTCAGACTGATTCTATAGACAGTTTTGAAAGACAGAGAACACACAGAAAAAAGT 1217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    204 HisGluCysAsmileAspSluVallysAsmVallyrPhchysAsmPhcilePhuPheMet 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          224 AsnSerLeaGlyLeuValThrSerAsnGlyLeuProGlaVālGlaAsslaeuSerLpaArq 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       284 AsnLeuAspGluGluValAsnValIleProProHisThrProValArqThrValMetAsn 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         384 LeulysSerGluGluArqLeuSerTleGluAsuPheSerTysLeuLeuAshAspAsh 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             404 IlePheHisMet SerLeuLeuAlaCysAlaLeuSluValValMetAlaThrTyrSerArg 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  424 SerThrSerGlnAsnLeuAspSerGlyThrAspLeuSorPheProTrp1]eLeuAsnVal 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  444 LouAsnLedlysAlaPheAspPheTyrLysVallTeGluSerPheTlefysAlaGludly 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        164 ThrAlaVallleProlleAsnGlySerProArgThrFroArgArgClyGlnAsnArgSer 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      918 GCACGGATAGCAAAACAACTAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAAGA 977
                                            124 AlaLysGlyGluValLeuGlmMetGluAspAspLeuVallleSerPheGlnLeuMetLeu 143
                                                                                                                                                                                                                                                                                                                                                                                     798 IGTGTGCTTGACTATITIAITAAACTCTCACCTCCCATGTTGCTCAAAGAACAATATAAA 897
84 LeupheSerlySLeudluArgThrCyscluLeu11e1yrLeuthrclnbroserSer 103
                                                                                                                                                               104 IleSerThrGluIleAsmSerAlaLeuValLeuLysValSerTrpIleThrPheLeuLeu 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 184 AlaArqIleAlaLysGluLeuGluAsnAspThrArqIleIleGluValLeuCysLysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       304 ThrileGinGinLeuMetMetIleLeuAsnSerAlaSerAspGinProSerGluAsnLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    364 T]eG]ySerG]bArqTyrLysLeaG]yVa}ArqLeaTyrTyrArqValMetGluserMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       324 HeSerTyrPheAsnAshCysThrValAsnProtysGluSerHeLeutysArqValLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                344 AspiledlyTyrilePholysCluLysPheAlaLysAlaWaldlysludlyFysValGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              244 TyrGludlalleTyrLeaLysAsaLysAspLeuAspAlaAraLeaPheteaAspHisAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   264 LysThyLeuGlafbrAspScrllcAspScrPheGluThrGlnArqThrProArqLysScr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>£</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \ddot{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qa ·
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ΟŸ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ^{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                    ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
```

```
(HITHEFIELD FOR THE STATE OF TH
                                                                                                                                                                                                                                                                                                                                                                            128 AACTIGACAAGAGAAAIGALAAAACATTAGAACGATGIGAACATCCATGGAATCC 1817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EXEMPLE OF THE STATE OF THE SECTION OF THE STANDARD OF THE SECOND OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24.3 ATGPARANTGAAAACAAATATTTGAGTAGCACCACCAGCCCCCTACCTTGTCA 24.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2218 AGAAGIGTIGAAAGGAAGGAAGCIOJAAAAAAGGAAAAAAAGIACGOIIIGAIIHHHH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2238 SACCAAALTATGATGTGTTCCATGTATGCCAAAGTGAAGAAATATAGACTTAAA 2297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2538 GGAGGGAACATCIAIAIIICACCCCIGAAGAATCGAIAIAAAAFITCAGAAAGGCTGCCA 2597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       454 AsnieuThrArgGluMetIleLysHisLeuGluArgCysGluHisArgIleMetGluSer 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *24 AspGn11eMetMetCysSerMetTyTC\yT\teCysTySVallysVallysAsn11cAspLesIys 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         744 Thr ProThitysMetThrProArgSerArgTleLeuValSerTleOlyGluSerPbrGl\gamma 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              764 Turserol digsebotistrolleAradioMetValC,sAsnSerAspAraVilted,y, 783 (1011) [1111] [1111]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       804 GIySerAspGluAlaAspGlySerIysHisLeuProClyGluSerIysPheGlnGlniys 823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  484 LeuAlattpleuSerAspSerProLeuPheAspLeuTleLysGlnSerLysAspArgGlu 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1911 DyProthrAspHistauGluScrAlaCysProteuAsnicuProteuGinAsnAsnHis 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.24 ThralaalaaspMetTyrLeuSerFroValarqSerProLysLysLysGlySerThrThr 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                44 ArdValAsuSerfhrAlaAsnAlaCluThrClnAlaThrSerAlaPhoGlnfhrGlnlys 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  584 ArgLeuAsnThrLeuCysGluArgLeuLeuSerGluHisProGluLeuGluHisIleIle 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.4 AtdVa)LentleLysGludludhifyrAspsertleTleADValPheTyrAsnSorValPhe 693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *84 MetGluArqLeulysThrAsnlleLeuClnTyrAlaSerThrArgProProThrLeuSer 703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74 ProlleProffislleProArgSerProTyrLysPheProSerSerProLeuArgllePro 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            724 GlyGlyAsnileTyrileSerProtectySerProfyrfgsileSerCluGlyGeutte 743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           '84 ArgSerAlaGluGlySerAsnProProLySProLeuLySLySLeuArgPheAspileGlu 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               604 TrpThrtouphealnHisThrteuglnAssaaluTyrGluLcuMctArgAspArgHisLcu 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>...</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ę.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \bar{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>~</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \mathbb{F}_i^*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           >
```

```
PRI 05 MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hopq.A., Bia.B., Onadim.Z. and Cowell.J.K.
Molecular mechanisms of oncogenic mutathons in tumors from patients with bilateral and unilateral retiroblastoma from Nati. Acad. Sci. U.S.A. 90 (15), 735:7355 (1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Partial inactivation of the RH product in a family with incomplete peretrance of familial relinoblastems and benign relinal temors unserse 9 (5), 1311-1316 (1394) 94203660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   McGeb.T.L., Yandeli,D.W. and Dryja,I.P.
Structure and partial genomic sequence of the human retinoblastoma
susceptibility gene
Gene 80 (1), 119-128 (1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mechanisms of oncogenesis in pathents with familial retinoblastoma
Br. J. Cancer 68 (5), 958-964 (1993)
                                                                                                                                                                                                                                                                                                          Homo sapiens retinoblastoma susceptibility protein (RH1) mRNA and mutations.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chadim, Z., Hoga, A., Haird, P.N. and Cowell, J.K., Spreagenic Felici mutations in excuse 0 of the FBI gene in families showing incomplete penetrance and mild expression of the rethinds astoma phencype.

Proc. Natl. Acad. Sci. U.S.A. 89 (13), 6177-6181 (1992)
                                                                           2838 CTGGCAGAAAATGACTTCTACTCGAACACGAAAAGGAGAAAATGAAATGATAGAAAATG
2778 CGATCAGATGAAGCAGATGGAAGTAAACATCTCCCAGGAGAGTCCAAATTTCAGCAGAAA 2837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hogg A., Onadim, Z., Baird, P.N. and Cowell, J.K.
Detection of heterozygous mutations in the RH1 gene in
retinoblastoma patients using simple-strand conformation
Felymerphism stallysis and polymetase chain reaction sequencing
Oncogene 7 (7), 1445-1451 (1992)
                                             824 LeuAlaGluMetThrSerThrArqThrArqMetGlnLysGlnLysMetAsnAspSerMet 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Krateke, R.A., Otterson, G.A., Rogg, A., Coxon, A.B., Geradts, C.,
Cowell, J.K., and Rayo, F.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                            retinoblastoma protein; retinoblastoma susceptibility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mutation data provided by Dr. B.L.Gallie, Hespital for Sick Children
                                                                                                                                                                                                                                                                                              SKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Onadim, Z., Hoqq, A. and Cowell, J.K.
                                                                                                                                                                                                                                                                                           4839 bp
                                                                                                                                                                        2898 GATACCTCAAACAAGGAAGAAAA 2921
                                                                                                                                               844 AspihrSerAsniysGluGluLys 851
                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens conA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                   L41870.1 GI:793994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Toronto ONT W5G 1X8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           416 813-5868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       555 Univ. Ave.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kratoke, F. A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (sites)
                                                                                                                                                                                                                                                                                        HUMRB1MRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90006771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94031584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93348271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Proc. Na
92335261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1352398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1352883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8217609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8346255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2701949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Canada
                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                  HUMRH1MRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPCANISM
                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHMHIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MLLLLI NI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOTENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MINORIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTHURS
                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORNAL
                                                                                                                                                                                                                                           RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                               q
                                                  ô
                                                                                                                                               οy
```

FAX: 416 813-4989

```
Capyright (c) 1993 - 2003 Compugen Ltd.
```

nucleic search, using sw model M nucleic

Run on:

January 16, 2003, 15:20:22 : Search time 2934.01 Seconds (without alignments) 18469.506 Million cell updates/see

US 09 026 459A 42 Title: Perfect score:

1 GGOGTCATGCCGCCCAAAAC......AAATGAGGATTATTGATAGT 3347 Sequence:

Gapop 10.0 , Gapext 1.0 Secretary tables

16154066 seqs, 8047743476 residues Sear ched:

32 (08) 32 lotal number of bits satisfying chosen parameters:

Minimum DB Seq Tendth: 0 Maximum DB Seq Tendth: 2000000000

Post processing: Minimum March 100% Maximum March 100% Listing first 45 summaries

EST - * Latabase :

em_estba:* em_esthum:* em_estin:* om_estmu; em_estpv; em_estpo; em_hte;* qb_estl;* qb_estz:* qb_hte:* qb est 6;*

cm_qss_tun:*
cm_qss_tun:*
em_qss_nus:*
em_qss_ntus:*
em_qss_other:* gb_gss:*
em_gss_hum:*
em_gss_inv:* em dss rod:* em_dss_plu:* om_estium:* qb_est4:*
qb_est5:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		; e c				
NO.	Score		Ţ	DB	ID	Description
	910.2				BM450031	BM450031 AGENCOURT
7	40.6	27.2		-	1051 14 BM561083	HMS61083 ACENCOURI
-	e e e	3.5.6	1981	-	BQ4 39.22.1	BO439221 ACENCOURT
₹	H 4 4 . H	, i	E B B	~:	HO220175	HO220275 ACENCOURT
u"	752.4		1122		BM545881	BM545881 AGENCOURT
ď.	7.25.4	21.7		5	AL597811	AL597811 DKFZp3130

BGE10661 602611848	ALS6 4757 ALS6 4757	MG570456 602591412	BM466194 AGENCOURT	BM453724 AGENCOURT	BM475604 AGENCOURT	B1868359 603392330	BALLEZZ AGENCHORT	BE549278 601064567	BOS 18.2 19 60.2644717	HM264009 iq43108.x	BEORZB46 RC2-BT064	AWSH3181 Lallh09.y	AL539644 DKFZp314P	HG253543 602364278	ALSONON DKEZP313G	AKO11246 Mus muscu	AA76.4411 vw54a04.r	AW368234 CM3-HT018	AA76.4485 vw54h01.r	AWSR2967 1a08cob.y	ALGS2790 DKFZp3131	ALC 2094 1 DKF2[p3:620]	BE941236 MRO HT015	AV715544 AV715543	BF144857 601790343	B1151568 602916108	AA258255 2159404.1	HC149050 un88c01.y	AWS02887 UI HF BN0	BE168095 QV3-HT051	B1821116 603035591	HM456728 AGENCOURT	H1526982 602927177	BE944784 RC3-H1094	AI094215 qb04a02.x	AL598766 DKFZp413F	BE865749 601678131	A1082179 0x75e04.x
Z BG610661	AL563757	2 BC570456		3 BM453724	3 BM475604	3 B1868359	4 NQ202007	D RE539278	2 80616219	4 BM264009) BE082846		AL599633		4	1 AK011246	<) AW368234	AA76 1485	0 AW582967		AL120941			2 BF144857		<	2 BG149050					3 B1526982	2 BE944784	A1094215	AL598766	2 BE865749	A1082179
824 1	795	767				_		797 10			694 10	623 10					914 9	588 10		01 863	5 49 9		597 12		734 12		525 9	584 12			659 13		7 34 13	497	457 9	742 9	869 1	447 9
20.9	20.9	20.7	20.7	20.3		19.7	19.3	19.2	19.5	18.4	18.3	18.1	18.1	17.8	17.3	17.2	17.2	16.9	16.7	15.8	15.8	15.8	15.4	15.3	15.3	15.1	14.8		14.5	14.4	14.3		14.2				11.6	13.4
9.669	698.2	692.2	8.169	829	665.2	660	646.6	643.6	642.2	617	614	605.2	605	596.4	580	576.4	575.2	566.4	558	530.2	530	528	516.8	513.2	512.2	505.2	493.8	486.4	484.4	481.4	480.2	476.6	74	459.2	457	457	454.2	447
7	ထ	Φ	10		12	13	14	15	16	C 17	97 J	67	50	2.1	CI CI	en Eu	C 24	ទ	د 3و	E-	58	6.°	C 30	31	32	**	34	ئ. ج	36	C 37	38	39	40	4.	c 45	4 ≯	44	c 45

ALIGNMENTS

RESULT 1 BM450031	
1,00 US	BM450031 1023 bp mRNA linear EST 05 FEB 2002
DEFINITION	o sariens o
	5', mRNA sequence.
ACCESSION	BM450031
VERSTON	HM450031.1 G1:18499071
KEYWORDS	EST.
SOURCE	human.
ORGANISM	Home sapiens
	Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi.
	Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
REFERENCE	1 (bases 1 to 1023)
AUTHORS	NIH-MGC http://mgc.nci.nih.gov/.
TITLE	National Institutes of Health, Mammalian Gene Collection (MGC)
JOHENAL	Unpublished (1999)
COMMENT	Contact: Robert Strausberg, Ph.D.
	Email: cqapbs.remail.nih.gov
	Tissue Produtement: AICC/b7D/PP
	CDNA Library Preparation: Life Technologies, Inc.
	CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
	DNA Sequencing by: Agencourt Bioscience Corporation
	Clone distribution: MGC clone distribution intermation can be
	found through the J.M.A.G.E. Consort iunivillan, at:
	b++ + × × × × × × × × × × × × × × × × ×

http://imade.lini.gov Plate. hiAM12204 row. d column. 22 High qualify sequence stop: 643. Localiou/Qualifiers 1.,1023 FEATURES

source

```
/clone=TMAGEREAGON_TO.
/clone=Thb="NHI_MGG_72"
/clone=Thb="NHI_MGG_72"
/clone=Type="melandicher health: A continuation of the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1935 CAAAGFGAAGAHATAGAGGFFAAAAFFGATTGTAACAGGAFACAGGKFCFFCC 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2115 TICCACCAGGCCCCTACCTTGTCACCATACCTCACATTCCTCGAAGCCCTTACAAGTT 2174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2175 TOCTASTTANGSTINGSALLSSAANSAANALSITATATATTEANSSASAGAGTGG 2234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2235 arataaaattitmagaaggifigopaamamaamaaaaggagaagaagaagaaga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2295 AGTALCAALIGGIGAATCATTCGGGAATTTTGAGAAGTTCCAGAAALAAATGAGATGGT 2354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2415 GAAAAAACIACCCI FIGABAFITGAAGATGAGATGAAGAGAAGAAGABFIGG 2474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2475 AGGAGACHCCAAAFITTCAGCAGAAACTGGCAGAATGAGTTGTACTCGAACACGAAGGCA 25534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2535 AAAGCAGAAAATGAATGATAGCATGGATACCTCAAAGAAGGAGGAAGAAATGAGGATGTCA 2594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2595 GGACCIIGGIRGAFAPIGIGIFAFAPPIPIGATHPAPPIPPIPIPIPIPIPAPAGAIGHGAPAFAPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2655 TAACII IGGGAGGIITIITIITIITII GGGGAGAITIITAATATGIITIGAGGIITIITIITIIGIIGGATAT 2714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2715 AAAAIGIGCAGAIGTAAIITII GGGIGAITGCIAAGGGAGITGGAAAIGIIAGIGAIT 2772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 TIPPAPPAGGOOGGERAPPTGTPAPPAPPAPPTGAPATHPPPGAAGGGGFFFAQAAGPT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               34 L. AGTATCAAT FOOTPAAN CALTFOODSAN FITC FGAGAAGTTFCAGAAAA AAA FCAGATGGT 1420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481 HAAAAAATTAGGTTTGATATTGAAGGATGAAGCAGATGGAAGTAAACATCTCCC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 PCATGCTGTTCAGGAGACATTCAAACGTGTTTTGATCAAAGAAGAGGAGTATGATTCTAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 FCCTAGITCACCCTTACGGATICCTGGAGGGAACATCTATATTTCACCCCTGAAGAGTCC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 13; Length 1923;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches 43; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 910.2; DB 13
Pred. No. 2.1e-167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       287
                                                                                                                                                                                                                                                                                                                                                   Average isser, size 2 kb
Technologies." 211 c 197 g 281 :
/orqanism-"Homo sapions"
                                          /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27,28;
95,28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                       3.44 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    972;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OHOTY Wateh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>:</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ê
```

```
/note-"Organ: eye; Vector: pCMV-SPORT6; Site_1: Not1;
Site_2: Sall; Cloned unidirectionally, Primer: Olige dl.
Average insert size 1.75 kb. Library constructed by Life
                                                                                                                                                                                                                                                                                                                                                                                                            Euteleostomi;
                                                                                                                                                                                              2773 GIPPEPPPPAGAAGAPPGAAAATGTTCPGTAAA FOCTGCGATPTAAAAAGTTGTAGPAGA 12892
                                                                                 2833 PEGFET-COPPIPATIONANGIANAFIGE I GPGCITINI GGATAGIANGANI GG----GCC 1-2888
                                                                                                                                                                     DERM AGASTEGISTAMENTEGALARONNAS OFFICERACITACITECTECTETTSTAGGATAT 2948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1153 THOTATHAGGGAGTAATGGAATGCATCAAATGAGAAGAAGAACAACCATTALCCAFTCAA 1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1213 AATTTTAGGAAACTTCTGAATGAGAATTTTTGATATGTCTTTTATTGGGGLGCCLCTT 1272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1093 AAANSTRIGGSTANASTRIGTGTCGAAAATTGSALCACAGCGATACAAACTTGGAGTTCGC 1152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA Library Preparation. Life Technologies, Inc. CDNA Library Arrayed by. The L.M.A.G.E. Consortium (LLNL.) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                      841 GITATITATACCAGATIGAAAATCTIGIGIAAAICCTGCCAATTAAAAAGTIGIAGCAGA 500
                                                                                                        National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2) Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Eutele
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   79 13, Longth 1951;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /lab_host."DH10B (phage resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 909.1; PB 13,
Pred. No. 3.1e-167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            · ·
                  Average insert size 1.75 kb. Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type-"retinoblastoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7.667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               row: m column: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
Contact, Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib+"NIH_MGC_67"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 1051)
NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="IMAGE:5550905"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 High quality sequence stop: 737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 197 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BM561083.1 GI:18806043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27 24;
98,48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    221 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                 5', mRNA sequence.
BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.LAM12263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . .1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Hest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human.
                                                                                                                                                                                                                                                           2949 A 2949
                                                                                                                                                                                                                                                                                                      1021 A 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Source
                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                          BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OFIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                        Ē
                                                                                                                              Ę
                                                                                                                                                                                                                D.
```

```
Eukarpoia, Met. Par Chordata: Craniata, Vertebrata, Euteleostomi;
Mammalia: Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                            1274 GAGGI IGIAALGGCCACAIAIAGAGAGAGIACICAGAATCTTGATTCTGGAACAGAT 1332
                                                                                                                                                                                                                                                                                                                                                                                                514 CHALIMAACAA FOAAAGGACGAGAAGGACCAACHGATCACCFFGAALCLGCFFTSCCFF 1572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     69.4 GCAACCTCAGGCT FCCACACGCAGGCATTGAAATCTAGGTCTCTTTCACTGTTTTAT 1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1754 AAAAAAGTGTAFCGGCTAFGCCTAFTCGGGCTAAAFACACTTTGIGAAGGCCFFCFGFGF 1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       813 GAGTACCAGAATTAGAACATATCATCTGGACCTTTTCCAGCACACCTGCAGAATGAG 1872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1874 TATGAACTCATGAGGGATATGGGGGATTTATGATGTGTTCCATGTGTGGGGTA 1932
                                                                                                                                                                                                                                        1333 TOTETHER AND A GRAD GRAD GROUND TO A DATE TO A DATE TO THE A DATE TO THE A DATE TO THE A DATE OF THE OF THE A DATE OF THE A DATE OF THE A DATE OF THE A DATE OF THE O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1633 TOTOCAAAGAAAAAAGGTTOAACTAGGGGTGTAAATICIACTGCAAATGCAGAGAGAGAAA 1692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1933 TGCAAAGTGAAGAATATAGAGGTTAA-ATTCAAAATCATTGTAAGAGGATGT 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 AATH FLAGGAAACHGLGAALGAGAGALTITITGATATGTGTTTTALIGGGGTGTTTT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661 AAAAAAGUUALALCOGCIAGCIAFCICCGGCTAAAIACACTTTGTGAACGCCTTCTGTT 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721 GAGCACSCAGAATTAGAACATATCATCTGGACCCTIITCCAGCACACCIGGAGAATGAG 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NIH MAC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1992 ICCTCATGCTGTTCAGGAGACATTCAAACGTGT-TTTGATCAAAGAAGAGGAG 2043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    901 FOUTCATGOTGNICAGGAGACATICAAACGIGIGITIGAICCAAGAAGAGGG 953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: eqapbs ramail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RQ43921.1 01:21178297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 1081)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5', mKNA sequence.
BQ439221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Home Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JUSTINAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BQ4 49221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    - MMEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SULES
                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    É
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>2</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ĩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
```

```
Znote-Tordan: testis: Vector: pCMV SPORTS; Site, 1: Not1; Site, 2: Sall; Cloued unidirectionally: olido dr primed.
                                                                                                                                                                                                                                                                                                                                                                                                               Average insert size 2.5 kb. Libiary enriched for full-length clones and constructed by Lite Technologies Note: this is a NHLMGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2869 IGGATAGTAAGAAIGGCCCIAGAGIGGGAGICCIGAIAACCCAGGCCEGEITTAGACTACTT 2928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2449 GAAGCAGATGGAAGTAAACATGTCCCAGGAGAGTCCAAATTTTCAGGAAATTGGGAGAA 2508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2569 AACAAGGAAGAAATGAGGATCTCAGGACCTTGGTGGACAMTGTGTACAMTGTGGATT 2628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2629 CATTGTCTCTCACACATGTGATGTATAACTTTCCCAGGTTCTCTTTALGGCCAAATTA 2688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2689 AIAICTICAGCICTITITGIGGAIATAAAAIGGCAGAIGCAAITGITIGGGIGAITGT 2748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2749 AAGCCACTTGAAATGTTAGTCATTGTTATTATACAAGATTGAAAATCTTG KGTAAATCC 2808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2809 TGCCATTTAAAAAGTTGTAGCAGATTGTTTGCTTGCAAAGTAAAATTGCTGTGTTTA 2868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2929 TGCCTTCTTTTGTAGGATATAGGTGALGTLIGGTGTTGTTTTTALTAATTTATATGTATA 2988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0049 IIIGATIGACIGCCCALICACAAAATTAICCIGAACICTICTGCAAAAAFSGATATTAF 4108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cONA Library Preparation: Lite Technologies, Inc. CONA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation CLone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241 ATATCTTCAGCTCTTTTGTGGATATAAAAFGTGCAGATGCAATTGTTTGGGTGATTGCT 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301 AAGCCACTTGAAATGTTAGTCATTGTTATTATACAAGATTGAAAATGTTGTAAAATGC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GAAGCAGATGGAAGTAAACATGTGGCAGGAGAGTGCAAAATTTGAGGAGAAAAATGGGAAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2989 TTTTTTAATTTAACATGAACACCCTTAGAAAATG1G1FC1A1G1A1F11FCAAA1GFAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541 TTTTTTTAATTTAACATGAACACCTTAGAAAATGIGTCCIATCIATCITCAAATGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone_lib-"NIH_MSC_92"
/tissue_type-"embryonal carcinoma, cell line"
/lab_host-"DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25.6%; Score 856; DB 14; Length 1081;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. 8e-157;
0; Mismatches
                                                                                                                           http://image.llnl.gov
Plate: LLAM13211 row: k column: 01
                                                                                                                                                                                                                                      /organism-"Homo sapiens"
                                                                                                                                                                           High quality sequence stop: 732.
                                                                                                                                                                                                                                                        /db_xret="taxon:9606"
/elone="!MAGE:6015480"
                                                                                                                                                                                               Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            183 q
Fissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 892; Conservative
                                                                                                                                                                                                                 .1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ಶ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                    Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QC!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BM545881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ...
L.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Λ<sub>Ο</sub> ..
                                                                                               a
                                                           8
                                                                                                                                        à
                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                    PICELIE
ADDITECT TO SET WITH WEIGHT OF HOME SUPERIOR CONVENTION IN MACHIGORATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ċ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissuc_type="embryonal carcinoma, cell line"
//lab.bost="DH10H (phage=resistant)"
//note="Ordan: testis: Vector: pcMv-SPORT6; Site_1: Noti;
Site_2: Sali; cloned unidirectionally; oligo-dT primed.
Average insert rize 2 % kb !!brary earliched for full-length clones and constructed by Life Technologies
Note: this is a NHH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Eufeleosfomi,
Mammalia: Eutheria: Primates; Catarrhini; Hominidae; Homo.
3109 IAGAAATTAGAAAAAATTACTAATTTTACAATTAGATTTTATTACTATTGGAATCT 3168
                                                                         3229 AGIATAACCATATGATACTATGTACTACTGAAACAGATTTCATACTCAGAATGTAAAA 3288
                                                                                                                                                                                                                                4289 GAACTIACTGATTATTTTCTTCATCCAACTTATGTTTTAAATGA-GGATTATTGATAGT 3347
                  CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by. The I.M.A.G.E. Consortiom (LLNL) DNA Sequencing by. Agencoutt Bioscience Corporation Clone distribution. MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                         1 (bases 1 to 881)
NIH-MGC http://mqc.nci.nih.qov/.
National Institutes of Health, Manmualian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    419 AAATGGAAGATGATGTGGTGATTTGATTTCAGTTAATGGTATGTGTTGAGTATTTTA 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 479 ITTAAACTOTOACOTOCOATGTTGCTCAAAGAACCATATAAAACAGGTGTTATACCCATTA 538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 AAATWAAAATGATCTGGTGATTTCATTTCAGTTAATGCTATGTGTCCTTGACTATTTA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25.2%; Score 844.8; DB 14; Length 881; 99.0%; Pred. No. 1.2e-154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               s lobal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. 1.2e-154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Plate: LLAM13287 row: e column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r³mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib-"NIH_MGC 92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_aref="taxin 9656"
/clone="IMAGE:6044522"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      High quality sequence stop 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tissue Procurement, AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                               BQ220275.1 GI.20401675
                                                                                                                                                                                                                                                                                                                                                                                                           5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                               HQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . CEMILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 871:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Source
                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYW:RDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JUST KNAT
                                                                                                                                                                                                                                                                                                                                              BQ220275
                                                                                                                                                                                                                                                                                                                               RESULI 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSI 'N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NI SIN
                                  9
                                                                                                                                                                                         3
                                                                                                                                                                                                                                    Ś
                                                                                                           Ê
                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
```

```
BM545831 1122 by mena lineur EST 26 FEB L002
AGENCOTFT_6505183 NIH_MGC_125 Homo sapiens cDNA clone EMAGE:5588245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Edkaryota, Metanoa, Chordata, Cramiata, Vertebrata, Entelesatom);
Mammalia; Eutheria; Primates, Catarrhini; Hominidae; Homo.
1 (bases 1 to 1122)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1199 GATTATUCATICAAAAIIITAGGAAAGTIGISAATSACAACA-TTTTGATATGT-CTTT 1256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         959 TGATTTTAAATTGAGGAAGTGATCAACCTTCAGAAAAFGTGATTTCCTATTLLAAGAACL 1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1079 AAGAGAAAITIGTIAAAGTGTGGGAA7AGGGIIGIGIGGAAAITGGAIGAGAGAAAITAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1139 AACHGGACHTGCHGIAHACGASTAAIGGAAIGCAIGCTTAAATGAGAGAAGAC 1198
599 TAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATATAGATG 558
                                                                                                                                                 181 TAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATATATAGATG 240
                                                                                                                                                                                                         659 AGGIGAAAAAIGITIAITICAAAAAITITAAIACCITITAIGAAITCTCTIGGACTIGIAA 718
                                                                                                                                                                                                                                                                                                                                                          361 AAAATAAAGAICTAGATGCAAGAITAITIIIGGAICAIGAIAAAACICITCAGACTGAIT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       839 CIAIAGACAUITITGAAAGAZAGAGAGAGAGAGAAAAAGIAACUTIGAIGAAGAGGIGA 898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      48i AIGIAAIIUULUUAUAUAUAUIUUAGIIGIIAGGAUIGIIAIGAAAGATAIUUAAIAAIIAA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541 TGATTITAAATICAGCAAGIGAIGAAGCIICAGAAAAICIGATTICCIATTITAACAACT 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601 GCACAGTGAATCCAAAAGAAAGTATACTGAAAAGAGTGAAGGATATAGGATACATCTTTA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241 AGGIGAAAAATGITTATTICAAAAATTITATACCITTTATGAATTCTCTTGGAGIIGIAA 300
                                                                                                                                                                                                                                                                                                                            719 CAICIAAIGGAUITUCAGAGGIIGAAAAICITICIAAAUGAIACGAAGAAAITTATUTIA 778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   899 ATGINATIONALACACIOCAGIIAGGANIGHIAIGAACACIAICCAACAATIAATOA 958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIH-MGC http://mgc.mci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MET)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                              779 AAAATAAAGATCTAGATGCAAGATTATTTTTGGATGATGATAAAACTGTTGAGAGTGALL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Comportium (LLML)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1257 ATTESTSTEPTTTTTTAGTTESTAATGESTAGATAIAGT 1296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact, Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: cgapbs-r@mail.nih.gov
Fissue Procurement: Invitrogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RM545881.1 GI:18778365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5', mRNA sequence.
RM545881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BM545881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOHRNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
```

```
Site 1: Erokv (destroyed); Site 2: Not1; RNA source pool of three ovaries, from females ranging in age from 38 to 49 yo. Library is oliqo-dI primed and directionally cloned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     constructed by C. Gruber (Invitrogen). Research Genetics tracking code 036."
                                                                                                                                                                                                                                                                                                                                                                                                    (ECORV sile is destroyed upon cloning). Average insert size 2.1 kb, insert size range 1.3.5 kb, Library is
                                                                                                                                                                                                                                                                                                                                                                                                                                                   normalized and enriched for full-length clones and was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2374 CTCAAAAGAAGTGCTGAAAGAAAGCAACCTCCTAAACCACTGAAAAACTACGCTTTGAT 2433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2614 GTACACCHPIGGATTCATFGFCFCTCTCACAGATGTCACTGTATAACHTTGCCAGGTTCTGT 2673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2794 AICHIGIGIAAATCCIGCCATTTAAAAAGTIGTACCACATTGTTTCCTCTTCCAAAGTAA 2853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2914 CCEGETCEGACTACTETCCCT ICFFFEGGATATAGGEGATGFFFGCPCFFGFFFTAF 2973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2314 TTGGGGACTTCTGAGAGTTCCAGAAATAAATGAGATGGTATGTAACAGGGGACGGTGTG 2373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2434 ALIGAAGGATGAGALGAAGGAGATGGAAGTAAAGATGGCGAGGAGGGGGAGGTGGAAATTTGAG 2493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2554 AGCATGGATACCTCAAACAAGGAAGAAATGAGGATCTCAGGACCTTGGTGGACACTCT 2613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2674 TIATGGGGACATTTAATATGTTGAGCTCTTTTTGTGGATATAAAATGTGGAGATGCAATT 2733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27.34 GITTGGGGGALIGGTAAGGGACITGAAATGITAGTGATTGTTATTTATAGAAGATTGAAA 2793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2854 AATTGCTGTGCTTTATGGATAGTAAGAATGGCCCTAGAGTGGGAGTCCTGATAACCCAGG 2913
DNA Sequencing by: Agencourt Bioscience Corporation can be clone distribution: MAT clone distribution information can be not through the LM.A.G.E. Consortium/LIAN. dt: http://mmqc.llnl.gov
                                                                                                                                                                                                                                                                                                                    /hote-"organ: ovary (pool of 3); Vector: pGMV-SPORT6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               800 CTCAAAAGAAGTGCTGAAGGAAGCAACCTTAAACCACTGAAAAAAACTAGGCTTTGAT 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360 ATTGAAGGATGAGATGAAAGATGGAAGTAAAAGATGTYGGGAGAGAGTGGAAATTTGAG 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600 TTATIGGCCACATTTAATATCTTCAGCTCTTTTTGTGGATATAAAATGTGCAGATGCAATT 659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          780 AATTGTGTGTGTETATGGATAGTAAGAATGGCCCTAGAGTGGGAGTCCTGATAACCCAGG 839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22.5%; Score 752.4; DB 13; Length 1122;
95.6%; Pred. No. 1.3e-136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    359 (
                                                                                           Plate: LLAM12359 row: a column: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                U; Mismatches
                                                                                                                                                                                                                                                                     /clone_lib="NIH_MGG_125"
/lab_host="DH10B"
                                                                                                                                                                                                  /ordanism-"Homo sapiens"
                                                                                                             High quality sequence start: 48
High quality sequence stop: 773.
                                                                                                                                                                                                                                                /clone-"IMAGE:5588245"
                                                                                                                                                                                                                       /db xref-"taxon:9606"
                                                                                                                                                          Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    216 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    $60 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ouery Match
                                                                                                                                                                                    .5.111.55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>2</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          =
```

```
EST 14 AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST (Poustka, A., Wellenreuther, K., Mowes, H.W., Weil, H. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 727)
Poustka,A., Wellenreuther,R., Mewes,H.W., Weil,B. and Wiemann,S.).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: poustkaympimg-berlin-dahlem.mpg.de
This is the 5' sequence of the clone insert
Clone from S. Wlemann, Molecular Genome Analysis, German Cancer
Research Conter (DREY): Email s.wiemann-adkfr-heidelberg.de;
sequenced by DREX (German Cancer Research Center,
Heidelberg/Germany) within the cDNA sequencing consortium of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note-"Vector: pTriplEx2: Site_1: StitA; Site 2: StitB;
                                                                                                                                                                                   2974 TAAITIAIA - TOTATAITITITIAAITIAACAIGAA CACCCIIAGAAAATGIGGCTA 3030
                                                                                            3031 TCTATCTTCCAAATGCAATTTGATTGACTGCCCATTCACCAAAATTATCTGAACTCTTG 4090
                                                                                                                       No sI sequence available.
This chone (DKRZpA1908H6) is available at the RZFD in Berlin.
Please contact the KZPD. Ressourcerontrum, Heubnerweg 6, 14059
Herlin-Charlottenburg, GERMANY; Email: clone@rzpd.de.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1725 GAAATCTACCTCTTTCACTGTTTTATAAAAAAGTGTATCGGCTAGCCTATCTCCGCT 1784
                                          899 TAATTTATAAIGGATATTIITTIAATTTAACAIGAANCACCTIIAGAAAAIGIGICCIA 958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels 0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GAAATCTACCTCTTTCACTGTTTATAAAAAAGTGTATCGGTTAGCCTALCTGCGGCT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DKFZp31300816_rl 313 (synonym: hlee2) Homo sapiens cluMa clone
DKFZp31300816 5', mkNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 9; Length 727;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Max-Planck-Institute for Molecular Genetics
finestrasso 73, 14195 Herlin, Germany
Trel: 49-40-84131623
Fax: 49-30-84131128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone_lib="313 (synonym: blec2)"
/dev_stage="adult"
/lab_host="bH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21.7%; Score 725.4; DB 9; 99.9%; Pred. No. 2.5e-131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          HENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 198 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                  727 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xret-"taxon:9606"
/clone-"DKFZp31300816"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 40 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                     3150 TATITIACIALIGGAAICIGATATA 3174
                                                                                                                                                                                                                                                                                                              1078 TATTTTACTTGAAAAACGGAATA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA-collection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AL597811.1 GI:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Poustka A.J.
Department Lehrach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   German Genome Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              161 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 726; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                     AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                              AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                     SHOOTS
                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                            q
                                                                                              ô
                                                                                                                                      qq
                                                                                                                                                                                        ò
```

```
linear EST 18-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota: Metazoa; Chordata; Craniata; Verlebrata; Euteleostomi;
Mammalia; Eulheria, Pilmales; Cataribini, Huminidae; Homon
I (bases 1 to 823)
NHH-MGC http://mgc.nci.nib.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #02611848F1 NIH_MGC_60 Homo Sapiens conA close image:4737634 51,
                                                                                                                                                                                                                                                                                                                                                                                                                                    2145 ACCICACATECTCGAAGGCCTTACAAGTTFOTAGTTFOADOTTAOGATTOFFGAAG 2204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2.205 PAARATELATATETRAGEREGAAGAGHERATAAAATTEGAGAAGGHEHGEAAAAGT 2264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2265 AACAAAA IGAC ICGAAGA IMAAAAA TITITAG WATTAATIAG WAAA TAA INGGGAAG TITA 3334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2485 TRATEGAARGAAGCAACCONCOTAAAGCACTGAAAAAACTACGCTTTGAATATTGAAGGATG 2444
                                                                    1905 AATTA KAATGIGTPGCATGPATGCATATGCAAAGTGAAGAATATAGACCTTAAATTCAA 1964
                                                                                                                                                                                                          1965 AATCAITGIAACAGOAIAGAAGGICIITGTIGAIGTIGTICAGGAGAAAAIIGAAAAQGGG 2024
                                                                                                                                                                                                                                                                             2025 TEEGAFCAAAGAAGGAGFATGAFEGTATTATAGTAFFFFFATAGFGGGFGGFFGTFCAFGA 2084
                                    61 AAATACACITIGIGAACGOOTITOTIGIGAAGAAGAAAATAGAAATAIAAAAAATAIGGAA 120
                                                                                                       121 CCTITICGASCACCACCAGAATGAGTATGAGTCATGAGAGAACATTTGGACA 180
                                                                                                                                                         CDNA Library Preparation: CLONETECH Laboratories, Inc. CDNA Library Arrayed by: The L.M.A.G.R. CONSOTTIUM (LLNL) DNA Sequencing by: Incyre Cenomics, Inc. Clone distribution: MGC clone distribution can be
                                                                                      Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cqapbs ramail, nih, qov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tissue Procurement: DCID/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BG610661.1 GI:13662032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2445 AGATGAA 2451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721 AGAIGAA 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NOT LINITED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SRCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ASTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEFEREN'E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JUNNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYW (RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19901908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSI :N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              : MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S.E.
   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>ء</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ä
                                                                      ŝ
                                                                                                       £
                                                                                                                                           Ś
                                                                                                                                                                        ŝ
                                                                                                                                                                                                              'n
                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
```

tound through the I.M.A.G.E. Consortium/LLNL at -

```
2475 AGGAGGEPAAATTFOAGGAAAAPGGAAAIGAATTFOTAFTATOTAGAAAGAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2595 GBADCEHBBIGGANAPENPARAPERFEGAFFICAAFFICAFFICAFFICAFGAGAGAFGTGTA 2654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2895 GGAGTGCTGATAACCCAGGCTGTCTGACTACTTTGCCTTGTTTGCATGGGTAGGATAJGGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2955 TGTTTGCTCTTGTTTTTTTTATTATATGTATTTTTTTTAATTTAACATGAACACCCT 3014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3075 TTATCCTGAACTCTTCTGCAAAATGGATATTATTAGAAATT---AGAAAAATTACTA 3131
                                                                                                                                                                                                                                                                                                                        Laboratories (Palo Alto, CA). Note: this is a NIH_MGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 AAAATGIGCAGATGCAATGITIGGGTGATTCCIAAGCCACTIGAAAIGTTAGICATIGT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541 TAGAAAATGTGTGTATGTATGTTGGAAATGGAATTTGALFGAGTGGCGATTGACGAAAA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361 GTTTCCCCCCTTCCAAAGTAAATTGCTGCTTTTATGGATAGTAAGAATGGCCCTAGAGTG 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 AGGAGAGTEGAAATTTGAGGAGAAAETGGEGAAATGAGTTETACTEGAAGACGAATGCA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                 9: Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2535 AAARGAGAAAATGAATGATAGRATAGATARRITAAAGAAGAAGAAGAAATIGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2775 TATTTATACAAGATTGAAAATGTTGTGAAATGCTGGGATTTAAAAAGTTGLAGGAGALL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2715 AAAAVGVOOAGAVGCAAVTGTTTGGGVGAVVCCYAAGCCACTYGAAAVGTTAGTGAVYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TR 12, Lungth 823;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. 2.6c-126;
0; Mismatches 34;
                                                                                                                                                                                                                                                                                                                                                     271 t
                Ξ
                                                                                                                                                                                                                                                                                                                                                                                                    20,0%; Score 699.6.
                                                                           /organism-"Homo sapiens"
                column:
http://image.llnl.gov
Plate: LiCMAGGs row. o column:
High quality sequence stop: 709.
Location/Qualifiers
                                                                                        /db_xref="taxon.9606"
                                                                                                                                                                                                                                                                                                                                                       142 9
                                                                                                                                                                                                                                                                                                                                                                                                               94.88;
                                                                                                                                                                                                                                                                                                                                        Library."
148 c
                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 779, Conservative
                                                         .823
                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                       262 a
                                                                                                                                                                                                                                                                                                                                                                                                    Onory March
                                                              source
                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                              PEATHRES
                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ĝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ē,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ē
```

```
767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AU. HINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HG570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.0008
                                                                . ਟੂੰ
---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                         ð.
                                                                                                                     ò
                                                                                                                                                        ਨੇ
                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                        90
                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                     90
                                                                                                                                                                                                                                                                                                                                                                                                90
                                                                                                                                                                                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                ALS63757 LILLNELOD NHC4 HOMO Sapiens CDNA clone CSUDDO07YAUS 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 enriched, double-stranded cDNA was digested with Not I and cloned into the Not I and Eco RV sites of the pCMVSPORT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       vector. Library was normalized. Library was constructed by Lite Technologies. Contact: Feng Liang Life Technologies, a division of Invitrogen 9800 Medical Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Anote "organ: brain: Vector: pOMVSPOPT 6; 1st strand cown
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Motazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              was primed with a NotI-oligo(dT) primer. Five prime end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Drive Boskeille Maryland 20866, 088 Fix (1) 301-610-8971 Email: illangelitetech.com URL: http://illlequih.inviltoqen.com 26.others 148 (17-9 - 255 t. 26.others)
3132 AITITACACAFIAGAFITTAFITACTGGAATCTGGAFATACTGGTFGTFGTTGTTTTAF 3191
                                                                         3192 AAAAITIIPOLIIIAALIAAAIAAAAGSTOOAAOOTAARAAOTATAAAOATATOATATOA
                                                                                                6.46. AGAACATGAATGTAATATAGATGTGAAAAATGTTTATTTCAAAAATTTTATATGTTT. 695.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        672 AGAACATGAATGTVATATAGWTGAGGTGAAAAATGTTTWTTTCAAAAATTTTATACCTTT 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            696 FATGAATTCTCTTGGACTTGTAACATCTAATGGACTTCCAGAGGTTGAAAATCTTTCTAA 755
                                     661 ALTITACACICAT TAGATICAATITACIATICAATICIGATATACIGIGIGIGIGICA - 11CA 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      516 TAAAACAGCTGTTATACCCATTAATGGTTCACCTCGAACACCCAGGGGAGGTCAGAAGA 575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           576 GAGTGGGALAGGAAAAAAAACTAGAAAIGALAGAAAAAAAAATAATTGAAGTTGTGTGTAA 635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3, Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HP 191 91006 EVRY cedex - France
Email: seyret-4enoscope.cus.fr, Web : www.qenoscope.cns.fr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 20.3%; Score 698.2; DB 9; Longth 792;
Hest Local Similarity 93.6%; Pred. No. 4.9e-126;
                    Indels
                                                                                                                                                        4252 TAPTACTSAAACAGATTTCATACCTCAGAATGTAAAAGAACT 3293
                                                                                                                                                                             777 TACLATHER GAGALICALACHELLELLELLE | 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Li, W.B., Gruber, C., Jessee, J. and Polayes, E.
Full length cDNA libraries and normalization
Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /tissue_type="neuroblastoma_cells"
/lab.bost "bH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genoscope - Centre National de Sequencage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone_lib-"LTI_NFL001_NBC4"
/sex-"male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism-"Homo_sapiens"
/db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone-"csobboo7yAo5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                            AL564757.1 GI:12914464
                                                                                                                                                                                                                                                                                                                                  prime, mKNA sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 792)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                          Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                       human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 722;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                           RESULT 8
ALS6 47572c
                                                                                                                                                                                                                                                                                                                                                                                                                                        HCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HASE COUNT
                                                                                                                                                                                                                                                                                                                                                           ACTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FUJENAL.
                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NICIN
                                                                                                                                                                                                                                                                                                                                                                                                                   SAURCE
                                                                                                                                                                                                                                                                                              50.87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                     Ē
                                                                             5
                                                                                                              Ē
                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
```

```
BG570456 767 bp mRNA linear EST 10 APR-2001 602591312F1 NIH_MGC_77 Homo Sapieus CDNA clone (MACH.4717874 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
Eukaryola, Metaloa; Chordata; Craniata; Verfebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidue; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1116 CGAAATTGGATGAGAGGGATAGAAAGTTGG AGTIGGGTIGTALTAGGAGTAATGGAA 1173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1174 PCCAPGCPFAAAPCAGAAGAAGAFTATGCAFTCAAAATTTFAGAAACTFCFGAAF 1233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  $ i, 7
                                                                                                                                                                                                                                                                                                                                                                                                                                             612 TATGAATTCTCTTGGACTTGTMACATCTWALGGACTTFCAGAGGTTGAAALLFTTTFTAA 553
                                                                                                            816 TGATAAAACTCTTCAGACTGATTCTATAGACAGTTTTGAAACAGAGAGAACACAAAA 875
                                                                                                                                                                                                                        876 AAGTAACCTTGATGAGAGAGGTGAATGTAATTTCCTCCACACACTGCAATTAGGACTGTTAT 935
                                                                                                                                                                                                                                                                                                                                                                                                                      936_GAACACTATCCAACAATTAATGATGATTTTAAATTCAGGAAGTGATCAACCTTCAGAAAA 995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 767)
Nim MGC http://mgc.nci.nih.qov/.
National Institutes of Health, Mammallan Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at: http://inage.llai.gov
                                                                              756 ACGATACGAAGAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTATTTTGGATCA 815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      312 TYTGTTTTCYTWTTTTTACGACTGCACAGTGAATCCAAAAGAAAGIA1AC1GAAAAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1056 GAAGGATATAGGATACATCTTTAAAGAGAATFTGGTAAAGGTGTGGGAAAGGTTGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDNA Library Preparation: CLONTECH Laboratories, Inc. CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLML)
1234 GACAA - CATTTTTCATATGTCTTTATTGGCGTGCTTGAGGTTGTAAT 1283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: cgapbs-r≝mail.nih.gov
Tissue Procurement: CEONTECH Laboratories, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plate: LLCM1568 row: h column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact, Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop: 726, Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref-"taxon:9606"
/clone="IMAGE:4717874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_lib="NIH_MGC_77"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BG570456
BG570456.1 GI:13578109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
```

```
lissue Procurement: ATCC
                                                                                  HM466194.1 GI:18515236
                                                                                                                                                                                                                                                       Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 728; Conservative
                                             5', mRNA sequence.
BM466194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . 972
                                                                                                                                           Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                         numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                         TELINITI N
                                                                                                                                         OPGANISM
                                                                                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                ACCESSION
                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                  AUTHORS
                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                    VERSION
                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D,
4
                                                                                            S'-ATTCIAGAGGCTGAGGCGGAGATG-dT(30)BN-3' (Where B + A, C, or G and N - A, C, G, or T). Average insert size 1.9 kb (range of 5-4-0 kb). 12/15 colonies contained inserts by PCR this library was enriched for full length clouds and was constructed by Cloncech laboratories (Palo Alto, C). Note: this is a NIH AGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2555 GCATGGATACHTHAAANAAWGAGAAATGAGGAFCHFAGGAYCHTGGTGGACACTGTG 2614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1035 ICTECCAAATGCAAFFEGAFFGGCATTCACCAAAATTAFCCFGAACTGTCTGC 3093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1094 AAAAATGGATATTATAAGAAATTAGAAAAAATTACTAATTTTACACATTAGATTTTATT 3153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1214 AAAAGCTGGAAAGTATAACCATATGATACTATCATACTACTAGTGAACAGATTTCATA 3273
                                                                                                                                                                                                                                                                                                                                                                                                                     2815 FACACHTTGGATTEGATTEGTTETCATGTGACACTTTTCCCAGGTTCTGTTT 2674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2675 TATGGCACATTTAATATCTTCAGCTCTTTTTGTGGATATAAAATGTGCAGATGCAATTG 2734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2735 TITGGGTGATFOCTAAGGGACTFGAAAFGTAAGTOATGGTGTTATGTTATGTATATATATAGAAGGATGAAAA 2794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PARE FOLDING JAAATOOTOODATIIITAAAAAGTIITOTAGDAGAFIIGHIGHIGHIGGAAAGIIAAA 2854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2975 AATTIALAIGTAPTTTTTTAATTTPAACAFGAACCTTAGAAAATGTGTGTGTGTGTATGTA 3034
                                                                                                                                                                                                                                                                                                                                                                                                                                        121 IAFGGCCACAFTTAATAICTFCAGCTCTFTTFTGTGGAFAFAAAFGFGGAGAFAGAAFG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 FTTGGGTGATTCCTAAGCCACTTGAAATGTTAGTCATTGTTATTTTATACAAGATTGAAAA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42. AATITATATGIATATTTTTTAATTTAACAIGAACACCCTTAGAAAATGTGTGTGTATGT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541 AAAAATGGATATTAFTAGAAATTAGAAAAATTACTAAFTTTACACATTAGATTTTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64 G. AAAAGCI GGAAGC - AAGTATAACCA1 ATGATACTATCATACTAATGAAACAGATTTCATA 718
                                                                                                                                                                                                                                                                                                            4; Caps
                                                                                                                                                                                                                                                                                                                                                                  29.7%; Score 692.2; DB 12; Length 767;
97.1%; Pred. No. 7.3e-125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1274 CCICAGNAIGI-AAAAGAACIIACIGAIIAITIICIICAICCAACIIAI 3321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                          18;
                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                            ..
                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                T { } 7
                                                                                                                                                                                                                                                                                                        Matches 747;
                                                                                                                                                                                                                                                                     Unionly Match
                                                                                                                                                                                                                                                                                         16,03
                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                  RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \gtrsim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \stackrel{>}{\supset}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
```

FESULT 10 BM466194

```
linear EST 05-PEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ~
                                   sapiece TNA Clone IMAGE:5576939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note-"Organ, testis, Vector, pCMV-SPORT6, Site_1: Not1: Site_2: Sail, Cloned unidirectionally, oligo dT primed. Average insert size 2.5 kb. Library enriched for full-length clones and constructed by Lile Technologies. Note: this is a NH_MGC Library." 2 others
                                                                                                                                                                                                                                                                       Edkaryola, Metaboa; Chordata, Chaniata: Vertebrata, Eureleostomi;
Mammalia: Eurheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 972)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2491 PAGPAGAAAPTGGGAAAATGACTFFFAAPTGAAQAGGAAAAGGAGAAATGAAT 2550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2551 GATAGCATGGATACCTCAAACAAGAAAAATGAAGATCTGAGGACCTTGGTGGAAAC 2610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2731 ATTGFIGGGGGGTGATFCCFAAGCCACTFGAAAFGTFAGTCAFTGTTATFTFAFAGAAGAIFG 2/90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2791 AAAATCTTGTGTAAATCCTGCCATITAAAAAGITGTAGCAGATTGTTICCTCTTCCAAAG 2850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution. MGC clone distribution. Information can be
found through the I.M.A.G.E. Consortium/Lim.A.t.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 GATAGCATACCATACCTCAAACAAGGAAGAAATGAGGATCTCAGGACCTTGGTGGAGAGAG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 TGTTTATGGCCACATTTAAIATCTTCAGCTCTTTTTGTGGGAIATAAAATGTGCAGATGA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241 ATTGTTTGGGTGATTGCTAAGGCAGTTGAAAJGTTAGTCALLGTTATTTATACAAGALLG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIH MGC Entp.//mgc.nci.uih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2611 IGTGTATACCTCTGSATICATTGTCTCTCACAGAIGIGACIGIALAACITTCCCAGGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2671 "GTT" "ATGCCCACATTTAATATCTTCAGCICTTTTTGTGGGATATAAAAIGTGCAGAIGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20.7%; Score 691.8; DB 13; Length 972; 96.7%; Pred. No. 8.6e-125; Live 0; Mismatches 19; Indels 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clobe_lib:"NIH_MGC_92"
/tissue_type="embryonal carcinoma, cell line"
/lab_host="DH10B (phage resistant)"
          FENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          http://imagé.linl.gov
Plate: LLAM12329 row: ) column: 12
High quality sequence stop: 621.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact, Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
8M466194
ANENG CPT_F4F6373 NIH_M80_32 Hom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone-"IMAGE:5576939"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon.9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualitiers
```

13 ACGATGTGAACATCGAATCATGGAATCCCTTGCATTCACATTCACTTTATTTCA 72

```
EST 05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Anorday ones with year of power Spite_1: Not1; Site_1: Not1; Site_2: Sall: Cloned unidirectionally. Primer: Oligo dT. Avorage insert size 2 kb. Library constructed by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В 45 bp — mkNA — I песат EST 05-FEB-2003
AGENCOTET_640274 ! MH_MGC_72 HOMO sapicus cDNA clone IMAGE:5528814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryoja, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
2911 AGG/CTGTCTGACTACTITGCCTTGTTAGACAIAIGGGGGTGTTGGCLCTTGT 2970
                                                                                                 2971 TATTAATTTATATGTATATTTTTTAACATGAACACCCTTAGAAAATGTGTGCTA 3030
                                                                                                                                                                                          8031 FOTATOTICCAAATOGAATIIGALIGACTGGCCATFCACCAAAATTATGCTGAAGTGTTG 3090
                                                                                                                                                                                                                                                                                         8091 TGCAAAAATGGATATTATTAGAAATTAGAAAAATTACTAATTTTAGAAAATTTTAGATTTT 3150
                                                                                                                                                                                                                                                                                                                                                                                       4151 ATTITACTATIGGAALGIGATALACIGIG ----IGCTIGITTTATAAAATTITGCTTTT 3205
                         541 TCTATCTFCCAAATGCAATTGALTGACTGCCCATTCACACAAAATTATCCTGAACTCTTC 600
                                                                                                                                                                                                                                                                                                                                         601 TOTAAAAALGGATATTATTANAAALFAGAAAAAATTACTAATTTTTAGAGALTAGATTTTT 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                        661 ATTITACTATICGAATCIGALAIAIACTGGGGGTIGGTITITAIAACAATITIGCCITIIA 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 835)
NIH-MGC bitp: The red rib per/
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The 1.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20.3%; Score 578; DB 13; Length 835; 100.0%; Pred. No. 4.3e-122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      l others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /lab_host-"DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone_lib-"NIH_MGC_72"
/tissue_type="melanotic melanoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1206 AATTAAATAAAAGTE-GGAAGGAAAGTATAAGC 3237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plate: LLAM12206 row: e column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Average insert size 2 kb. Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D.
Email: cgapbe-ramail mih gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tissue Procurement: ATCC/DCID/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 High quality sequence stop: 647.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xret "taxon:9606"
/~tone="tMAGE:5528814"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    137 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BM453724.1 GI:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    210 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5', mRNA Sequence.
BM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . 8 ±5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3011 CF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DRCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BM45 47 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11.11.11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           H. MILES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               50.50
     5
                                                                                                 5
                                                                                                                                            <u>:</u>
                                                                                                                                                                                             5
                                                                                                                                                                                                                                           ã
                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                    =
                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                     â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
```

1452 ACGATGTCAACATGGAATCATGGAATGCGTGTGTGGAGTTCACGTTATTGA 1511

0; Mismatches

Conservative

est Local Similarity

Matches 678;

0; Indels 0; Gaps

```
BM475603 1001 bp mRNA linear EST 05 FEB 2002
AGENCOOKT_6480007 NIH_MGC_92 ROMO SAPIENS CHNA clone IMAGE:5575683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi,
                                                                                                                                                                                                                                                                                                                                  1752 TAAAAAAGGTGTATGGGGTAGGGTATGTGGGGGGTAAAATAGAATTTGTGTGAAGGGGTTGTGTG 1811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 5 5 1
                                                                                1572 TOTTAATOTTOGTGTGGGGAATAATGACAGGGGGGGGAGATATGTATGTTTOTTGTAAG 1631
                                                                                                                                                                 1632 ATCTCCAAAGAAAAAGGTTCAACTACCCGTGTAAATTCTTACTGCAAATGCAGAGACACA 1691
                                                                                                                                                                                                                                                 1692 AGGAAGGTGAGGGTTGCAGAGGGAGAGGCALTGAAATGTACHTGLTLLTACTGTLTTA 1751
                                                                                                                                                                                                                                                                                                                                                                                                                  1812 TGAGCACCCAGAATTAGAACATATCATCTGGACCTTTTTCCAGCACACACCCTGCAGAAFGA 1871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1932 ATGCAAAGTGAAGAATATAGACCTTAAATTCAAAATGGATGTAAAAGACATAGAAAGGATGT 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFO TALEATASTACTISTATAACTOOSTOTICALOTAGASACTIGAAAAAAAAATATTIOTAGTA "1111
1512 TCTTATTAAACAATCAAAGGGCGGAGAAGGAAGTGATTAATTTAATTTGTTGTTGTGT
                                                                                                                                                                                                                                                                                           312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by. Agencent Biostience Corporation Clone distribution: MGC clone distribution intormation can be
                   193 ATCTCCAAAGAAAAAAGGTTCAACTACGCGTGTAAATTCTACTGCAAATGCAGAGACAGA 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                       373 IGAGCACCCAGAATTAGAACATATCATCTGGACCCTTTTCCAGCACACCCTGCAGAATGA 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                        253 ACCAACCICAGGCTTCCAGAGCCAGAGCCATTGAAAICTACTCTCTTTCACTGTTTA
                                                                                                                                                                                                                                                                                                                                                     1872 GTATGAACTCATGAGAGAGAGACTTTTGGACCAATTTALGATGTCTTCGTTTCTATGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia: Eutheria: Primates: Catarrhini: Hominidae: Homo.
1 (bases 1 to 1001)
                                                                                                                                                                                                                                                                       CDNA Library Preparation: Lite Technologies, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Plate: LLAM12326 row: f column: 04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NIH-MGC http://mgc.nci.mih.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs ramail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BM475603.1 GI:18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2112 TGCTTCCACCAGGCCCC 2129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          673 TGCTTCCACCAGGCCCCC 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5', mRNA sequence.
BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BM475'603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POCHS
οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90
                                                                                                                                                                 òλ
                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                       £
                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
```

```
/clone="IMAGE:5575683"
/clone=lib="NIH_MGC 92"
/clone=lib="NIH_MGC 92"
/clone=lip="NIH_MGC 92"
/lab_host="mailtown liberary of line"
/lab_host="Organ=resis; Vector prMV SpoRF6; Site_1: NotI:
Site_2: Salt; Cloned unidirectionally; oligo-dT primed,
Accrage insert sine 2.5 km. Library enriched for
Tull-length clones and constructed by Life Technologies
Note: this is a NIH_MGC Tibrary and 288 the 178 cm. 186 q. 288 the salt sine and constructed by Life Technologies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          942 IATCCAACAATTAATGATGATTTTAAATTCAGCAAGTGATCAACCTTCAGAAAATCTGAI 1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1002 11--CCTALITTAACAACTGCACAGTGAATCCAAAAGAAAGTATACTGAAAAGGGTGAAG 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          402 IAAAGGGGAAGTATTACAAATGGAAGATGATGTGGTGATTTCATTTCAGTTAATGCTATG 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2.39 TAAAGGGGAAAGTATTACAAATGGAAGATGATCTGGTGATTGAATTTGAGTTAATGCTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           582 ACRARAMANANANGANTARANANTRATANGANASANTTATTGANASTTCLUTGINANGANA 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     642 IGAAIGIAAIATAGAIGAGGIGAAAAWGTTTAFTTTCAAAAATTTTTATAGGTTTTTATGAA 70]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            47 + TGAATGTAATATAGAGGTGAAAAATGTTTATTTCAAAAATTTTATATGAA 538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5.39 TECETIONACTIONAL MACANICIDAN MACA AND MACA AND MACA AND MACANICIDA AND MACAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83 SGAAGAAATTTATGTGTAAAAATAAAGATGTAGATGCAAGATTATTTTGGATGATGATAA 658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    882 DITTGATGAAGAGGTGAATGTAATTCTTCTACAAGACTCCAGTTAGGACTGTTATGAAGAC 941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   71.9 CCTIGATGAAAGGIGAATGTAATTGCTGCACACTGCACTTAGGACTGTATGAACA 778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              779 IATCCAACAATIAATGATGTTTAAATTCAGCAAGTGATCAAACCTTCAAAAATCCGAT 838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *42 ATCTA*TGAAATAAATTCTGCATTGGTGCTAAAAGTTTCTTGGATCACATTTTTATTAGC 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       462 FOR FOR THOM THATTHAT THAN THAN TO A CONTROL TO THE ANGLANCE AND TANK TANK TO SEE THAT THAN THE TANK TO SEE THAT THE TANK THAN THE TO SEE THAT THE TANK THAN THE TANK THE TEND THE TANK THE THE TANK THE THE THE TANK THE THE TA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            299 IGTCCTTGACTATTTTATTAAACTCTCACCTCCCATGTTGCTCAAAGAACCATATAAAAC 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2-2 IICICIIGGACIIGIAACAICIAATGGACIICGAGGTIGAAAAATGIITGIAAAAGGAIA 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25.2 CSAAGAAATITATCITAAAAATAAAGATCTAGATGCAAGATTATTTTTGGATCATGATAA 821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P.2. AACTOTTORGACTGATTCTATAGACAGTTTTGAAACACAGAGACACGCGAAAAAGTAA 881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Courty Match
Hest Local Similarity 94.6%; Prod. No. 1.3c-119;
Matches 700; Canservation
                                                                                                                                                                                                                                                                                                                                       Zorganism-"Homo sapiens"
Zdb_vrof "tavan.9666"
High quality sequence start: 17
High quality sequence stop: 734.
Iomation/Qualiliers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1050 GATATAGGATACATCTTTAA 1079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               899 CGLAAGGAAFAFAGGAATAA 918
                                                                                                                                                                                                                                            .1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         149 a
                                                                                                                                                                                                                                                                       SOUTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MASE CHINI
                                                                                                                                                                                     FEATHRES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          î
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
```

```
HINDHASS INDEAD SAFETS SINA CLONE EST 11-00T-2001 ACKNOWN NIH MON-30 Home Safets SINA CLONE (MACRES 102/22 5),
                                                                                                                                                                                                                Homo sapiens
Bukaryota, Mctaboa, Chordata, Cianiata, Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissuc_type="ademocationma, cell line"
/lab_host=bH108 (phage=resistant)"
/note=bH108 (phage=resistant)"
/note=ingal; iver: Vector: pCW-5*0F16; Site_1: Noti;
Site_2: Sall; Cloned unidirectionally; Oligo-dT primed.
Average insert size 1.7 kb. Library enriched for full-length clones and constructed by Life Technologies.
Note: this is a NIH_MSC_library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2453 MAGATIGGAAGTAAAMMATOTOMAGTAGAGTOGAAMTTTGAGGAGAAAGTGGGAGAGAATGA 2512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2513 CITCTACTCGAACACGAA1GCAAAAGCAGAAATGAATGAATGGATAGCATGGATACCTCAAAGA 2572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA Sequencing by: Incyte Genomics, Inc.
Clene distribution, MC Sinc distribution information can be found through the LLM.A.G.E. Consortium/LLNL at:
http://mage.lln.apv
Plate LLAM12026 row k column: 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 TGACTICGAAGATGAAGAATGTTAGTATGAATTGGTGAATTGGGGACTTCIAGAAGT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                National Institutes of Health, Manmalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1: Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ATATTICACCCINAANANIN ATATAAAAIIICAMAAMILCIGCCAACAACAAAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                           cDNA Library Preparation: Lite Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (ILNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2273 POACHORAGADGAAGAAGTERGTATGAATTGCTGAATGATTGCGGGACTTGTGAGAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 GAAGGAAGGTGGTAAAGGAAGAAAAAAGTAGGCTTTGATATTGAAGGATCAGATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19.7%; Score 660; DB 13; Length 672; 99.9%; Pred. No. 1.4e-118;
Live 0; Mismatches 0; Indels '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  186 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone-"IMAGE:5402622"
/clone_lib-"NIH_MGC_90"

    (bases 1 to 672)
    NIH-MGC http://mgc nci nih gov/.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop: 668.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xre1-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                             Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   134 g
                                                                                                                                                                                                                                                                                                                                                                                                                                         rocurement: AICC
                                                                                                                                         KI868359 1 GI-16042032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         124 C
                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 671; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .672
                                                                                              mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           228 a
                                                                                                                                                                                                                                                                                                                                                                                                                                         Tissue F.
                                                                                                                  н1868359
                                                                                                                                                                                              numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOUTCE
                                                                    No. I I I N I A del
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                   ORGANISM
                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                               JOURNAL.
RESULT 13
                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                               ATTHORS
                                                                                                                                                                KEYWORDS
                    B1868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                            SCUFCE
                                             LOCIIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
```

```
BULLILL? 886.1p MRY_92 FOT 02 MAY 1992
AJENYOURI,7566045 NIH_MRY_92 Homo sapiens CDNA clone IMAGE:6041563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note-"ordan: testis; Vector: pGMV-SPORI6; Site_1: Noti; Site_2: Sall; Cloned unidirectionally, olido dr primed. Average insert size 2.5 kb. Library enriched for full length clones and constructed by Lile Technologies. Note: This is a NHLMGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
Enkaryota, Motazoa, Chordata, Craniata, Vortebrata, Estelcostomi,
257.1 AGGAAGAAA EGAGGACTI CAGGACTITIGGI GGACACTIGITICAGTITIGATITIGATITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITICAGTITIC
                                                                                                                                                                                  2634 GICTOTONIAGATUTGACTATAAACTTTCCCAGGTCTGTTAAGGCCACATTAAATAT 2692
                                                                                                                                                                                                                                                                                                                                                                              2693 CTTCANCTCTTTTTGGGATATAAAATGTGCAGATGCAATTGTTTGGGTGATTCCTAAGC 2752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2753 CACLIGAAATGITAGTTGTTGTTTATACAAGATTGAA-AATCTTGTAAATCCTGC 2811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2812 CATTIAAAAAGTIGTAGGAGATIGITIGCICITCGAAAAGIAAAATIGCIGGITAAIGG 2871
                                                 481 CTICAGCICITITICIGGGAIAIAAAAIGIGCAGAIGCAALIGITIGGGGAITCCIAAGC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541 CACTIGAAATGITAGICATIGITATITATACAAGAITGAAAATGITGIGAAATCCIGC 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 880)
NIH MGC http://mgc.uci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cloue distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA Library Preparation: Lite Technologies, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) INA Sequencing by: Agencourt Bioscience Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                     19.3%; Score 646.6; DB 14; Length 880;
98.5%; Pred. No. 5.7e-116;
ative 0; Mismatches 9; Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone lib-"NIE_MSC_92"
//issue_type-"embryonal carcinoma, cell line"
/lab.host-"DH10H (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tound through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plate: LLAM13279 row: i column: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Robert Strausberg, Ph.D.
Email: egapbs r*mail.nih.gov
Fissue Procurement: AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              High quality sequence stop: 606.
Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /~lone "IMAGE:6041563"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RQ222227.1 01:20403627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q₩
₩.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2872 ATACTAACIANTO 2883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661 ATASTAAGAATG 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8022223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 664;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2RGANTSM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCHESTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POSTRIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWARDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NU22227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N.HWW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N177140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            X 018.E
    5
                                                                                         â
                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
```

```
EST 09 AUG 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Enkaryola, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601063567F1 NIH_MGC_10 Home sapiens cDNA clone IMAGE: 4449873 51,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       942 TATCCAACAATTAATGATGATTTTAAATTCAGCAAGTGATCAA-CCTTCAGAAAAATGTGA 1000
                                                                                                                                                                                                                                                                                                                  582 ACGGATAGCAAAACAACTAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAAA 641
                                                                                                                                                                                                                                                                                                                                                        315 ACCCATACCAAAACAACTACAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAACA 374
                                                                                                                                                                                                                                                                                                                                                                                                 642 TGAATGTAATATAGATGAGGTGAAAAATGTTTTGAAAAATTTTATATACTTTTTATGAA 701
                                                                                                                                                                                                                                                                                                                                                                                                                     702 TTCTCTTGGACTTGTAACATCTAATGGACTTCTAGAGGTTGAAAATGTTTCTAAACATA 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         762 GGAAGAAATITAIGITAAAAATAAAASAIGTAGATAGAAAHIKHIIIKGAKKAAKAA 821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             822 ARCTCTTCAGACTGALTCLA LAGACACTTT LGAAACACAGAGAACACACAAAAAGTAA - 881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          615 CCTTGATGAAGAGGTGAATGTAATTCCTCCACACACTCCACTTAGGACTGTTATGAACAC 674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 797)
NiH-MG http://mgc.nci.nih.gov/.
National lustitutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution: MGC clone distribution
                                                           402 TANAGGGGAAGIATIACAAATGGAAGAIGAITTGAIITGAIIIGAAGGIAIGA 461
                                                                                 75 ATCTACTGAAATAAAATTCTGCATTGGTGCTAAAAGTTTGTTGGAATGACATTTTTTATTAGC 134
                                                                                                                                             462 TGTGCTTGACTATTTATTAAACTCTCACCTCCATGTTGCTCAAAGAACTATATAAAAAC 521
                                                                                                                                                                                                                                522 AGCTGTTATACCCATTAATGGTTCACCTCGAACACCCAGGGGAGGTCAAAAAAAGAGTGG
                                                                                                                                                                                    195 TGTCCTTGACTATTTTATTAAACTCTCACCTCCCATGTTGCTCAAAGAACCATAIAAAAC
                                                                                                                                                                                                                                                    Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA Library Preparation: Lite Technologies, Inc. CDNA Library Arrayed by: Incyte Genomics, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        797 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-ramail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BE539278.1 GI:9767923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          http://image.linl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1001 TTTCCTATTTTAA 1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   735 TITTCCTATITTA 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA sequence.
BE539278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BE539278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
BE5 19278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCUS
                   a
a
                                                                                                   q
C
                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                        Q.
                                                                                                                                                                                                                                                                                                                                                                                                 ολ
                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                             ô
                                                                                                                                             οy
                                                                                                                                                                                    g
                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
```

```
ω
3
                                                                                                                                                                                                                                                                                                                                                                                                                                 /norfo-"Organ: corvix; Vector: pCMV-SPORT6; Site_1: Not1; Site_2: Sal1: Cloned unidirectionally. Primer: Oliqo dT. Average insert Size 1.5 kb. Library prepared by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2858 CITICCCASGITCIGITIATGGCCACAITIAAIAICITCAGCICITITIGIGGAIAIAAA 2717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000 CTGTTCAGGAGACATTCAAACCTGTTTTGATCAAAGAAGAGGAGTATGATTGTTATATAG 2059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2050 IATICIATAAACTCGGTCTTCATGCAGAGACTGAAACAAATATTTTGCAGTATGCTTCCA 2119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Z360 APARRICATORIA DEL GARABARA ARTIGENTICA A GARABARTORA A CONTROCA A CONTROCA A CATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2419 AAACTAGGGTTTGATATTGAAGGATCAAGTGGAAGTGGAAGTAAACATGTGGGAGA 2478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27.18 AIGIGGAGAIGGAATIGITIGGGIGA PTOCTAAGGGAGTIGAAAIGITAGTGATTGTTAT 2777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2120 CCAGGCCCCTAGCTIGICACCAAIACCICAGAITGCICGAAGCCCTTACAAGTITCCIA 2179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2180 ALTOARRITTARGGATTREFISSAGGGAAGALEIAIAHTTARGGGGGGGAAGAGGGG189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2240 AAATTICAGAAGGETCTGCACACOCACAAAAATGACTCCAAGATCAAGATCTTAGTAT 2299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24.29 CACTCCAAATTTCACTAGAAACTGAGAAAATGACTTCTACTGGAACA-GGAATGCAAAA 2537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25.48 GCAGAAAATGAATGATAGCATIGGATAGCTICAAAGAAGGAAGAGAAATGAGGATGTICAGGA 2597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2598 CCTTGGTGGACACTGTGTACACTGTGGATTGATGTCTCACACAGAGGTGACTGTATAA 2657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  119 CCAGGCCCCTACCTTGTCACAATACCTCACATCCTCGAAGCCCTTACAAGTTTCCTA 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  179 GITCACCCTIACGGAITCCTGGAGGGAACAICIAIAITTCACCCCTGAAGAGICCAIAIA 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FER FELLI FELLE FE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   115 CIGIGGGGAAGCAATG-TIGAGAATTCCTAAAGCACTTGAGAAGTTGGCGGGTCTTTT 773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 STGTTCAGGAGACATTCAACGTG-TTTCATCAAAGAAGGAGGAGTATGATTATAAG 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 643.6; DB 10; Length 797; Pred. No. 2.2e-115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     207 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
Plate: LLAMM427 row: 1 column: 18
High quality sequence stop for
togation/Wealifiers
//organism="Homo sapiens"
//db_xrel="taxon:9606"
                                                                                                                                                                                                                                                            /clone="IMAGE:3449873"
/clone_lib="NIH_MGC_10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     167 g
                                                                                                                                                                                                                                                                                                                                            line-"MGC36"
                                                                                                                                                                                                                                                                                                                                                          /cell_linc-"MGC36
/lab_host-"DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Technologies.
171 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19.2%:
95.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          747;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          URPLY Match
                                                                                                                                         Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mat: hes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE CONT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
```

```
Search completed, January 18, 2003, 04.09:46
Job time: Jobs.99 sees
```

deutore version 5.1.3 (opyright (c) 1993 - 2003 Compugen Ltd.

M protein - nucleic search, using trame_plus_p2n model

Pun on: January 17, 2003, 18:27:24 ; Search time 1840 65 Seconds

(without alignments) 7320.587 Million cell updates/sec

Sequence: | MUMGICIFIAAVDLDEMSFT......

Fqapop 6.0 , Fqapext 7.0 belop 6.0 , belext 7.0 belop 8.0 , belext 7.0 red: 14154066 seqs, 8097743376 residues Total number of hits satisfying chosen parameters: (2399

Minimum DB seq length: 0 Maximum DB seq length: 2000000000 Fost processing: Minimum Match 100% Maximum Match 100% Listing first 45 summaries

Command line parameters:

MODEL FIRMER PART MODEL | DEV-VED |

WODEL FIRMER PART MODEL | DEV-VED |

C. CALLO | DEVEL | MODEL AND MODEL |

C. CALLO | DEVEL | MODEL AND MODEL AND MODEL |

ODER PART | DEVEL | MODEL AND MODEL AND MODEL |

INITSAHIS | START | LEND-1 | MATRIX-B) OR UMES | TRANS-humand 0 | edi | LIST 45 |

INITSAHIS | START | LEND-1 | MATRIX-B) OR UMES | TRANS-humand 0 | edi | LIST 45 |

OUTEMINATION-200 | THE STORE-POT | THE MAX 100 | THE MINA | DOOR OR OF THE MODEL OF THE MODEL OR OF THE MODEL OF

Database : ESL:

16; em_estonii.

17; qb_quss:

18; em_qss_thn:

19; em_qss_thn:

20; em_qss_thn:

21; em_qss_thn:

21; em_qss_thn:

22; em_qss_thn:

24; em_qss_man:

25; em_qss_man:

26; em_qss_ploni*

em_qss_rod:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

			ac				
Kesu.	n.	č.	- Er - Er - Er	Length	DB	al	Secription
		1551	7 97	: (-	H H H H H H H H H H H H H H H H H H H	
		1473	34.5				
		1448	α 	•	7	B0000075	Tall and the Administration
		1339	? .	_	-	BM475603	BM475604 AGENCOURT
		1254	29.3		5	ALC97811	ALS97811 DKF2p3130
	_	36.5	5 8 C		5	HODDE 227	RUDDEET AGENCHURT
		1208	다. 22 74 년	•		KM45.3024	BM453724 AGENCOURT
	-	کا در ان کا د-	3 F	_	- 3	BM450031	BM450031 AGENCOURT
ے ر	4	1043	7. 47.	476	ت د	AI.563757	AZZZ 6 34 11 - V W 54 G (94 . 1 A 1 5 6 4 7 5 7 - A 1 5 6 4 7 5 7
		1037	24.2		- 3-	AL599633	ALS99644 DKFZp414P
Ü		1030	24.1		0.	BE082846	BE082846 RC2-BT064
		1016	24.7		2.	AW58 1181	AW584181 1411h09.y
U		1013	23.7		: ح	AA763485	AA763485 VW54h01.1
		1001	an a Tab		1 0	1305 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	86325364 60236464278
		0 / C	7 6 4 6 4 6		7 -	AN ABBLAG	AW 80,82.54 (M. 4 - H.J.O.J.B.
		1 d	 		` :	M1131368 AV716547	131101048 602916108 AV21643 AV216533
		955	i ci			BC349050	81149050 qu88c01.v
	3	$\overline{}$	 1 C4		2	BF144857	BF144857 601790343
	5.7	935	21.9		Ġ	AL692790	ALC92290 DKFZp3131
	ca c	308	ca s		0	BE539278	BE539278 601063567
	3	7 00 07 7 0 00 07	20 G 20 G 21 G		2 -	ALI20541 Bit 5 5 6 8 5	ALLECU41 DKDERT62D
	3 30	ن) m) 04 14			BG244088	BG244088 602358151
ပ			6. C1		C	BE931236	HI331236 MR0-HT015
	4		19.7		10	BE168095	BE168095 QV ₹ HT051
	æ	33.50 5.50 6.50	19.5		e c	BM4 904 16	BM490416 pqp2n.pk0
	œ	-			: ⊣ σ	AA072780	AACTOTHO HHITEAUS Y
)	78.1	18.3		. =	HM456728	5672
	32	751	17.6		0.	AW503514	AW503514 U1 - HE - BN0
Ć	20 CA	727	17.0		ۍ <u>-</u>	A1646038	A1646038 vw54a10.x
	9	œ	5.6		4	C82304	C82304 C82304 Deck
			15.6		-	B1696841	H1696841 603344967
	37	659	15.4		10	AW951604	AW951604 ES1363674
o	æ 3 ∽ 3	20 c 20 c 20 c	٠. د .		ۍ د د	A1606529 prosesses	A1606529 Vb27q08.y
	40	900	14.0			BE203/46 BI868464	NEZBO/46 601096510 NIMER459 604460440
	4.1	979	14.6		=======================================	BF466536	BF466536 UI M CG0p
	9	C	14.6		Ċ	BF998490	BE998390 CM2-GN016
	~ ·	613	14.3		5		A1745644 tr24b06.x
ပင	ታ ላ	ر 100 100 100 100 100 100 100 100 100 10	* · · ·	 	Z 5	BF560103 A1745643	BES60104 UL-R-Al-C Aliases a resamon s
	ì	` :					
						ALIGNMENIS	
RESULT	1.17.1						
BMS6108		E N	610R			ANG G	The state of the s
DEFI	DEFINITION		AGENCOURT	_6566134	Z	NIH_MGC_67 Home sapiens	CDNA clone IMAGE:5550905
ACCE	ACCESSION	BM.	mknA *	5', mKNA sequence. BM561083			
VERSION	NO.	RM 5	61083.1	01:1880604	908	043	
KEYW	KEYWORDS	EST.	. 6				
A C	ORGANISM		Homo sapiens	Suc			
		Fuk Mam	aryota; malia;	Metaze Eutheri	, g;;	ordata; imates;	Craniata, Vertidiata: Enteleosfomi; Catarrhini; Bominidae; Homo.
REFE AU	EFERENCE AUTHORS	NIN	(bases -MGC ht	<pre>1 (bases 1 to 1051) NIH-MGC http://mgc.nci</pre>	(15) IC. D	i.nih.qov/.	
II	TLE	Nat	ional	institut	s d	неа11ћ,	Mammalian Gene Collection (MGC)

```
High efficiency full length charactering Meth. Enzymol. 303, 19-44 (1999) 99279253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Carninci, P. and Bayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukary, Lu, Metudou, Cherdutu,
Mammalia, Eutheria, Rodentia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:12847243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 clone:2600017M22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AK011245.1 SI:12
HTC, CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          seduence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AK011246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20499374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 2
AK011246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOTTPNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDICINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHOPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDI, I NE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POUPNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BURLUS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
                                                                                                                                                                                    Ē
                                  Ω
                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                           급
                                                                                                                                                                                                                                                                                                                                                                                      ionally. Primer: Oligo dT.
Library constructed by Life
                                                                                   chNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL.)
DNA Sequencing by. Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLNL at
                                                                                                                                                                                                                                                                                                                             /tissue_type "retinoblastoma"
//ab_host:":H10B (phage resistant)"
//note="Gram: eye; Vector: p'MV-SPOFT6; Site_1: Not1;
Site_2: Sall; Cloned unidirectionally, Friench: Oliga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  337 AlaValdlyCinClyCysValCluileClySerCinArgTyrLysLeuGlyValArgieu 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   997 ValValMetAlaThrTyrSerArgSerThrSerClnAsnLeuAspSerClyThrAspLea 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          84 GIIGIAAIGGCCACATAIACACAATTTCAAAATCTTGAIFCTGCAACAGAITTG 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 417 SerPheProTrp11eLeuAsnValLeuAsnLeuIysAlaPheAspPheTyrLysVallle 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     457 CyscluffisArgileMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeu 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (2) Physically AshAshAshIlePheHisMetSerfetLetAlaCyAlaLetGl, 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4.7 GluserPhelleLysAlacludlvAsmLeuThrArdcluMetIleLysHisLeucluArg 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  **4 TGTGAACATCGAATCATGGAATCCCTTGCATGGCTCTCAGATTCACCTTTATTTGATCTT 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        477 HelyscloserlysAspargCluClyProThrAspHisLouGluSorAlaCysProLou 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                477 AsnLenProLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerProValArgSer 516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        459 TyrfyrArdValMotGluSorMetLodTysSerGluGluGluArgIruSerllyGluAsn 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 others
                                                                     CDNA Library Preparation: Life Technologies, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative.
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                   Average insert size 1.75 Kb.
Technologies." 221 c 197 g 299 t
                                                                                                                                                              http://image.llml.gov
Plate: LLAM12263 row.m column. 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
                                                                                                                                                                                                                                                        /ordanism "Homo saplens"
                 Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-U9 H26-459A 35 (1-832) y PMSKIDR3 (1-1051)
                                                                                                                                                                                                                                                                                                            /clone_lib-"NIH_MGC_67"
                                                                                                                                                                                                     High quality sequence stop: 737.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                         /db_xret-"taxon:9606"
/rlope-"IMAGE:5550905"
                                                                                                                                                                                                                     Location/Qualifiers
                                Email: cgapts rimail.mlh.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                        197 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.63e-156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1551.00
93.268
91.508
36.268
                                                                                                                                                                                                                                          . 1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                          SHICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ž
                                                                                                                                                                                                                                                                                                                                                                                                                                            SASE CHINE
JUST HAND
                                                                                                                                                                                                                     FEATURES.
                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                             KICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ٥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
```

```
Carninei, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Troh, M., Konco, H., Okasaki, Y., Waramassu, M. and Hayashisaki, Y., Normalization and subtraction of cap-trapper-selected cDNAs to prepare [44]? John libraries for rapid discovery of new access Genome Pes. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Shihara, K. Itoh, M., Airawa, K., Nadacka, S., Sasaki, N., Cardinsi, P., Kondo, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Suni, N., Ishi, Y., Nakamura, S., Hazana, M., Nishinari, T., Harada, A., Varamuri, E., Matsum-do, H., Sakaguchi, S., Ikeani, L., Kashiwadi, A., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Chara, E., Watshikadi, N., Vonda, Y., Ishizwa, T., Grawa, R., Hanaka, I., Matsuria, S., Kavai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Havashizaki, Y., Riken integrated sequence analysis (RISA) system-'844-lormat sequencing pipeline with 384 multicapillary sequencer consequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HTC 19-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Churdata, Craniata, Vertebrata, Enteleostomi,
Rodentia, Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AKO11246 Linear HTC 19-JAN-20
Mus musculus 10 days emblyo whole body conk, Kiken full-length
enriched library, cleme:2600017M22.retinoblastema 1, full insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         517 ProtystystystysClySorThrThrargValAsnSorThralaAsnAlaGluthrGluAla 536
                                                                                                                                                597 GPULPUMPTARGASPARGHISLPUASPYPRILLRAMPTARSSSKMCLTYRGTYLLCCYS 616 [HTTHTHTHTHTHTHTHTHTHTHTHTHTHTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  636 offisAlaValGinSluTharbetysArgVal LewileLysGluGluGid TytAspSer 655
                                                                        544 CCAAAGAAAAAAGIICAACIACBEGIGIAAATIETACIGEAAATGCAGAGACACAAGGA 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          904 TPATGFTRNI RAMMARANATTFAAAFGTGTGTTTGATPPAAGAAGAGAGGGTATGGTGGTGTGT 963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               964 IAIAIAAGNALIPLIAIAAPTESSSEETTTEATSCAASSÄSKETEAAAAAAESAAIA 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   656 IleIleVal-----PhcTyrAsnSerValPheMetGlnArqLeuLysThrAsuIle 672
                                                                                                                                                                                                                                                                                                              557 LysValTyrArgLeuAlaTyrLeuArgLeuAsnThrLeuCysGluArgLeuLeuSerGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                784 GAAGTGATGAGAGAGANTTTGGAGGAAATAIGATGIGTTGGATGTATGGGAIAIGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CENA to mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       577 HisProGlubeuGluffisllefleTrpThrbeuPheGluffisThrbeuGlubsuflufyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Vis more las (strain of 57 e.f.) It days embry: CENA to me clone_lib:RIKEN full-length enriched mouse cDNA library
```

```
346, t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
                                                                                                                                                                                                                                                                                                                                                                                                                               /protein_id-"BAB27494.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xret "GI:12847244"
/db_xret-"MGD:MGI:97874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-026-459A-35 (1-832) x AK011246 (1-1364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          307 q
                                                                                                                                                                                                                                                                                                                            retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NET SYFUNCTIVING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             =
                                                                                                                                                                                                                                                                                                                                                                                   /codon_start-
                                                                                                                                                                                                                  evidence:188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.610-148
                                                       151. . .1464
/qene-"Rb1"
/qene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1473.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3.06 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      96.498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90.10%
                                                                                                                                                                                                                                                                               putative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     404 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ်
လ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                            SOC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                :<u>`</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ċ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Carmine, F., de Formaldo, M.E., Brownstein, M.J., Bult, C., Fletcher, C., Fujita, M., Gariboldi, M., Gustineich, S., Hill, D., Klichano, M., Hume, D.A., Kamiya, M., Lee, M.H., Lydda, F., Nordone, F., Kind, B., Bindwald, M., Mashima, J., Mazarelli, J., Monkaerts, F., Nordone, F., Kind, B., Rindwald, M., Rodriguez, L., Sakamoto, N., Sasaki, H., Satoro, K., Schonbach, C., Seya, L., Shibata, Y., Storoh, K.F., Suzuki, H., Ioyo oka, K., Wang, K.H., Weitz, C., Whittaker, C., Wilming, L., Wynshaw Horis, A., Yoshida, K., Haseqawa, Y., Kawaji, H., Kohtsuki, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Adachi, J. Alzawa, K., Akahira, S., Akimura, T., Aono, H., Arai, A., Arakawa, T., Baldarelli, R., Bono, H., Brownstein, M., Bult, C., Carninci, P., Enkuda, S., Eukunishi, Y., Euruno, M., Hanagaki, T., Harai, M., Hill, D., Hiramoto, K., Hiramota, T., Hori, F., Hume, D., Imotani, K., Ishi, Y., Hram, M., Kawa, M., Kasukawa, I., Kato, H., Kawai, J., Kojima, Y., Konno, H., Kouda, M., Koya, S., Kurihara, C., Maisuyama, T., Miyazaki, A., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Osazaki, Y., Okido, T., Owa, C., Quackenbush, J., Sajic, P., Sahai, C., Sahai, K., Shibata, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  prepared by using trebalose thermo-activated reverse transcription and subsequently enriched for full length by cap trapper. Second strand cDNA was prepared with the primer adapter of sequence [5] GANANARAHIELGAGIHAALIAALOGGGGGGGGGG 3.1, CDNA was cleaved with Xhol and Sstl. Cloning sites, 5' end: Xbol; 3' end: Sstl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (REKEN), Laboratory for Genome Exploration Research Group, REKEN Genomic Sciences Center (GSC), REKEN Yokolama Institute; 1-7-22 Suphiro-che, Testramiku, Yokohama, Manaqawa 240-0045, Japan (E-mail:genome-resease.riken.go.)p, DRL:http://ren.go.jp, 17-22 Suphiro-che, Testramiku, GSC), Paxi81 45 508 2215, Paxi81 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Actone lib-"RIKEN tull-length enriched mouse cDNA library"
                                                                                   Kuwai.J., Shinadawa.A. Shibata.K., Yoshino.M., Itoh.M., Ishii.Y.,
Arakaw.T., Hara.A., Fukunishi.Y., Komo.H., Adachi.J., Fukuda.S.,
Alawa.R., Isawa.M., Nishi.K., Kiyosawa.H., Kondo.S., Yamanaka.I.,
Saito.J., okizaki.Y., Gojebori.T., Horo.H., Kasukawa.T., Saito.R.,
Kadota.K., Matsuda.H., Ashburner.M., Hatalov.S., Casavant.T.,
Fleischmann.W., Gadsferland.L., Gissi.C., Kinq.H., Kochiwa.H.,
Kuchi.P., Lewis.S., Matsud.Y., Nikaido.I., Pesole.G.,
Quackenbosh.T., Sehtiml.L.M., Staubli.F., Suzaki.R., Aono.H.,
Mathire.L., Washio.T., Sehtiml.L.M., Staubli.F., Suzaki.R., Aono.H.,
Haldarolli.R., Artsh.G., Hake.J., Molfolli.b., Pojunga.N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cDNA library was propared and sequenced in Mouse Genome
Encyclopedia Project of Genome Exploration Research Group in Riken
Genomic Sciences Center and Genome Science Laboratory in RIKEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        prepare mouse fissues. First strand cDNA was primed with a primer [5] GAGAGAGAGAGALOGAAGAGGIFHITHTHTHTHINN (1), cDNA was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yasunishi,A., Yoshida,K., Yoshino,M., Muramatsu,M. and
Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref "FANTOM_DB:2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /dev_stage="10 days embryo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xret-"MGD:MG1:1905260"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /ordanism-"Mus musculus"
/strain "c97HL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alb xret "taxen loggo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zelone-"2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 1464)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             146,4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HOST: SOLR.
11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21085550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11217851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOUTH OF
PERMIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
FITENAL
                                                       T.N.H.H.H.H.H.
                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JUNIENAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PEFEKENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDITAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N. WW
```

```
At rails lation = "MPPKAPRRAAAEHPPHPHPHPHFEDDPADDSDPEELIALARLEFE
EEEPHETAGGKINVOHMPKEARALIMENVONDOLIFOR TORNKETANOLICIPTAAV
DIJDEMPETHELOKELEJSVINE FOLLIKELDIS IN VONAMSKILIKKNONLITALSKILE
RTCELLYLTQPSSALSTEINSMLVIKTSWITELLAKGEVILOMEDDIV SFOLMM-VVDI
                                                                                                                                                                                                                                                                                                                                                                                     YFIKËSPPALLREPYKTAALFINGSPRIPHRGONRSARIAKOLENDIRITEULYREHE
CHIDEVKNVYFKNFIPFINSLGIVSSNGLPEVESLSKRYEEVYLKNKDLDARLFIJHH
                                                                                                                                                                                                                                                                                                                                                                                                                                                           KILOTOPIOSFETERIPRKNNPDEBANVVIPHIPVRIVMNITQQLMVILNSASDQPSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           964 TGTAAAGAACACAGTGTAATATAGATGAGGTGAAAATGTTTATTTGAAAAATTTTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          182 CystysGluHisGluCysAsmIleAspCluValLyoAmuValTyrFfteLyoAmuFheffe 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             202 ProPheMetAsnSerlauGlyLeuVallbrSerAshGlyLeufredluvalGluAshlau 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              844 CCATACAAAACGGGCACTGCOCATTAATGGTTCGCACTCGAACACTAGAGGGTCAG 904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    664 AGCAGIGCGIIAICIACIGAAAIAAAIICIA10116616CIAAAAA111C1106AICACT 724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             102 PheLeuLeuAlaLysclyGluValLeuGlnMetGluAspAspLeuVallleSerPheGln 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    84 CTAATGTTGTGTGTGAGTTGACTATTTTATTAAGTCTCCTCCTGCACTACTCAGAGAG 844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      142 ProfyrtysthralaValifeProffeAsnefySerProArgthrProArgArgeTyGln 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       162 ASBATGSetAlaArqIleAlaLysGlbLeuGlbAsbAspThrArqIleIleGlbValLeu 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 484 ACTGAGCTACAGAAAAAGCATAGAAACCAGTGTCTATAAATTCTTGGACTTATAAAAGAA 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  82 SerSerSer HeSerThrClaffeAshStaAlaix-uVallx-uLysValScrTrpHefhr 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     122 LeuMet Les CysVal LeuAspTyrFbeille Lys LeuSerProfit of Met La Lichaly and United TyrFbeille Lys Leu Met Leu CysVal Leu Faring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 LearrpGlylleCyslleFhelleAlaAlaVaiAspLeuAspuluMetSerPheThrPhe 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22 ThrClut.cuCiniysAsnileGluileSerValHisiysPhePheAsnicuLeuLysGlu 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                42 IleAspThrSerThrLysValAspAsnAlaMetSerArgLeuLeuLysLysTyrAspVal 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note-"data source.Mill, source key:Mil:97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 officers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1464
282
20
11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
Indels:
```

```
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             년
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ē
                                                                                                                                                                                                                                                                                                           Ξ
                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          چ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \delta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ĩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       \ddot{o}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        군
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ġ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             흔
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HQ220075
AGENTOURE_7572621 NIH_MGC_92 Homo sapiens CDNA clone IMAGE:6044522
57, mPNA sequence.
BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /issue_type="embryonal carcinoma, cell line"
//issue_type="embryonal carcinoma, cell line"
//ido_bust="bilo" [phoqu-resis and)"
//ido_bust="bilo" [phoqu-resis and)"
//ido_bust="line" [phoqu-resis and]
//ido_bust="line" [phoqu-resis and]
//ido_bust="line" [phoqu-resis and]
//ido_bust="line" [phoqu-resis and constructed by life Twohnelingies.
//ido_bust="line" [phoqu-resis and line" [phoqu-resis and line" [phoqu-resis and line" [phoqu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Eulejeostomi:
242 AspHisAspIySTEricoClnThrAspScrileAspScribcCluTbrSlaAryThrPro 261
                                                                                                 222 SerLysAraTyrGluGluIleTyrLeuLysAsnLysAspLeuAspAlaArgLeuPheLeu 241
                                                                                                                                                                                                                                                                                                                                                                                262 ArgigssorAsnicuAspCluCiuValAsnVallloProFroHisThrProValArgThr 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clone distribution: MGC clone distribution information can be tound through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      282 ValMetAsnIhrileGlnGlnGlnFeuMetMetIleLeuAsnSerAlaSerAspGlnProSer 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                National Institutes of Health, Mammalian Sene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDNA Library Preparation. Life Technologies, Inc. CONA Library Avrayed by: the LiM A.G.F. Consertium (TLML)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA Sequencing by: Agencourt Bioscience Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.24 GAAAAICIGAITIGCIACIICAAIAAIIGCACAGIGAAI 1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            142 GluAsoleuileSerlyrDhoAsoAsoPysThrVa!Asc 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            http://smaje linkary
Plate: LLAM13287 row: e column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
Contact Predert Strausberg, Ph D
Email: cqapbs.ramil.nih.qov
Thssav Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone="!MAGE:6044522"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 881)
NIH-MGC http://mgc noi nih gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High quality sequence stop: 690
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Adb_srief="19x-in-9666"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HQ220275.1 G1:20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.666-145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1448.00
98.308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             UIMAN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A infiller: Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE CHINT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Prod. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSEIN
KEYWIRUS
SHURYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         THERNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HU220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESIN
                                                                                                                                                                                                                                                                                                           Ē
                                                                                                                                                                                                                                                                                                                                                                                .
.-)
```

Conservative: Mismatches:

indels:

97.968 33.858

Best Local Similarity: Percent Similarity:

Ouery Match: DB:

```
BM475603 1001 bp mRNA linear BSI 05-FEH-2002 AGENCOURT_6480007 NIH_MGC_92 Homo sapiens cDNA elone IMAGE.5575683
                                                                                                                                   172 GluAsnAspTbrArgI!@Il@GluValLeuCysLysGluHisGluCysAsnIleAspGlu 191
                                                                                                                                                                                                                                                                                                                                                                                                                            192 VallysAsnValTyrPheTysAsnPheTleProPheMetAsnScrieuGlyteuValThr 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                     243 GTGAAAAAIGITIAITITITITIATAAATITIATAAAATITITATGAAATCTCTTGGACTTGTAAAA 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        272 ValiichrofroHisThrProValArgThrValMctAsnThrileCinCinicaMetMet 291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   292 HelewAsnSerAlaSerAspGlnProSerGluAsnLewHeSerTyrPheAcnAcnCys 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            312 ThrValAsnProtysClaSerIleLeutysArgValLysAspileGlyTyrilePbetys 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           603 ACAGTGAATCCAAAAGAAAGTATACTGAAAAGAGTGAAGGATATAGGALACALCIIIAAA 662
                                               112 MetGluAspAspLeuValileSerPheGlnLeuMetLeuCysValLeuAspTyrPheIle 141
                                                                                                                                                                                                                                    152 GlySerProArgThrProArgAlyGlyGlnAsnArgSerAlaArgHeAlatySGlnLeu 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     303 TCTAATGGACTTCCAGAGGTTGAAAATCTTTCTAAACGATAGGAAGAATTTATCTTAAA 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             252 HeAspSerPheGluThrGlnArgThrProArgLysSerAsnLeuAspGluGluValAst 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       663 GACAAAITIGCTAAAGCTGTGGGACAGGGTFGTGTGGAAAITIGGATCAGAGGGATACAAA 722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  783 TIAICCAITCAAAATIIIAGCAAACIICGAAIGACCACAITIITICAIAIGICCIIIAI 842
                                                                                         3 APGGAAGATGAPGTGGTGAPTTGAGTTAATGCTATGTGTCCTTGACTATATTATT 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    232 AsnLysAspleuAspAlaArgleuPheleuAspHisAspLysThrLeuGlaThrAspSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 391 cuAlaCysAlateuGleValValMetAlaThrIyrSer 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     118-00-026-459A-35 (1-932) x R0220075 (1-881)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BM475603.1 GI:18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5', mRNA sequence.
BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
```

```
/tissue type="embrydnal careinoma, cell line"
//lab_bost "DHIDW [phage-resistant]"
//nob_ost "DHIDW [phage-resistant]"
//nob_ost "DHIDW [phage-resistant]"
//nob_ost "Cond unidirectionally: oliqo-dT primed.
//ocrap isser: Size 2.5 kb Library enriched for
toll leadth closes and constructed by Life Icethnologies.
Note; this is a NHLMOG Library."
Enkaryota; Metazea; Chordata; Craniata; Vertebrata; Enteleostomi;
                                                                                                                                                                                                             cDNA Library Preparation: Lite Technologies, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) inNA Sequencing by: Agencourt Hisserience Corporation clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      158 qArqOpglaAsuArqSerAlaArqTteAlaLysGlaLeuGJuAsaAspThrArqIleII 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       598 GOGREGICAGAROAGAGEGCACGGATAGCAAAAACAACTAGAAAATGATACAAGAATTAT 457
                                                                                              Notional Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98 TATGATGTATĪGTI IGCACTCTICAGGAAALICGGAAAAGGACAAGIGAACI IALATATIT 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98 rTrp11eThrPheLeuLeuAlaLysGlys}uValLeusInMetGluAspAspLeuValI1 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          218 TTGGATCACATTTTTATTAGCTAAAGGGGAAGTATTACAAATGGAAGATGATCTGGTGAT 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             118 esemplacinicametical/ysvalicaAsplyrPhelletysicascrProProMetic 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          148 utentyscluprotyrLysthrAlaValileProlleAsnGlySerProArgThrProAr 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       178 octovatien/ystysGtuHisGtuCysAsniteAspGtoValtysAsnValTyrPhety 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                59 TyrAspVallcoPPcALaLcoPPcScrLysLcu-CluArqThrCysCluLcullcTyrLG 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                48 3FCCSAGTAATTGATAGGAGTAGGAAAGTTGATAATGGTATGTCAAGAGTGTTGAAGAAG 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             78 uThrelinProSerSerSerTileSerThrethilleAsaSerA]aLeuValLeuLysValSe 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               to LoutyschulleAspThrSerThrLysValAspAsuAlaMetSerArgLeuLysLys
                 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                              found through the L.M.A.G.E. Consortium/LLINL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1001
281
10
10
*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           288 t
                                                                                                                                                                                                                                                                                                                                   http://image.llnl.gov
Plate: LLAM12426 row: 1 column: 04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Levrenthi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels:
                                                                                                                Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US U9 U26 459A 45 (1 B32) x BM475603 (1:1001)
                                                                                                                                                                                                                                                                                                                                                                                    Bigh quality sequence start: 17 High quality sequence stop: 734.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          701000 Tib-"NIH_MGC,92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     daps:
                                                                  NIH MGC http://mgc.uci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref:"taxon:9606"
/clone="IMAGE:5575684"
                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                 Email: eqapbs-remail.nih.qov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        186 4
                                                                                                                                                                                           Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.220 133
                                              (bases 1 to 1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1449.00
94.87%
90,65%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           178 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41.40%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       guery Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ž
                                              REFERENCE
                                                                     AUTHORS
                                                                                                                   PERMAL
                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                              TITLE
                                                                                                                                          I N.HWWI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VEGUIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ì
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
```

```
mRNA linear EST 14 AGG 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST (Poustka, A., Wellenreuther, R., Mewes, H.W., Weil, B. and Wiemans

    (bases 1 to 727)
    Poustka,A., Wellenreuther,E., Mewes,H.W., Weil, H. and Wiemann,S.).

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryola, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarilini, Hominidae, Homo,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequenced by DKFZ (German Cancer Research Center,
Heidelberg/Germany) within the CDNA sequencing consortium of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No st sequence available.
This clone (MKZp313m8H) is available at the 8ZHO in Merlin.
Please contact the RZPD: Ressourcencentrum, Heabnerwey 6, 14459
Berlin-Charlottenburg, GERMANY: Email: clone*tzpd.de.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: poustka*mpimg-berlin dahlem.mpq.de
This is the 5' sequence of the clone insert
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research, Center (DKFZ): Fmail s.Wiemann 9dK/Z heidelberg.de:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   458 TCAACTTCTCTCTAAAGAACATGTAATATATAAAATGTGAAAAATGTTTATTTCAA 517
                                                                          ₩.7
                                                                                                                                                                                               578 TGAAAATCTTTCTAAACGATACGAAGAAATTTATCTTAAAAATAAAAGATTTAGATGTAAG 647
                                                                                                                                                                                                                                                                                                                                                                                                                                       758 AGTTAGGACTGTATGAACACTATCCAACAATTAATGATGATTTTAAATTCAGGGA 817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     878 AAAGCTATACCGGAAAAGAAGCGTAAGGAATATAGGAATAACCTCTTTTAAAGAAAAAA 937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ALS97811
DEFERSTERORIS_EL 314 (Symenym: Elect) Home suplems class clone
DEFERSTSOURIS 51, mENN sequence
                                                                                                                                            218 1619AsnteuSertysArgTyrGluGluTleTyrLeutysAsntysAspleuAspAlaAr
                                                                                                                                                                                                                                               238 gleuPheLeuAspHisAspLysThrLeuGlnThrAspSerlleAspSerPheGluThrGL
                                                                                                                                                                                                                                                                    258 nArqThrProArqLysSerAsnLeuAspGluGluValAsnVallleProProHisThrPr
                                                                                                                                                                                                                                                                                                                                                                     198 sAsnPheIleProPheMetAsnSerLeuGlyLeuValThrSerAsnGlyLeuProPheVa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       317 uSerIleLeuLysArg-----ValLysAspileGlyTyrIle · · PheLysGluLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Max-Planck-Institute for Molecular Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Thnestrasse 73, 14195 Herlin, Germany
Tel: +49-30-84131623
Fax: +49-30-84131128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism-"Homo sapiens"
/db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ALS97811.1 G1:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        334 --PhoAlaLysAlaValGly 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   938 TTCTGGCTAAAAGCCTGGGG 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Poustka A.J.
Department Lehrach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                German Genome Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sontce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULL 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A1.597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1111.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1,0008
                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
C
                                                                                              q
                                                                                                                                            οχ
                                                                                                                                                                                            a
                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

```
Actions "express accorded."
[Actions 11:00]
[Advantage adult."
[Advant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 547 (ysSer1btSer1cuSer1cuPhelyrtlystysValTyrArg1cuAlaTyrt.cuArg1cu 566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6.27 | Hemelmatoysformetiynily (eqystysvaltysasmilaaspientystyly) | 126 | 127 | Hemelmatoysformetiynily | 127 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     447 LeulleLysGluGluGluTyrAspSerIlelleValPheTyrAsnSerValPheMetGln 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               202 ApriloTeriloSerProfessiyoSerProferiysTləSərGi,GlyLosProfitrPro 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          727 BrigsmetThrProArgScrargliciouValScritcGlyGluScrihcGlyThrScr 746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              747 GlullyePbowlniysiloAsnCinMotValCysAsnSorAspArgValicutysArgSor 766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                587 LeuPhedluHisThrLeuGlnAsnGluTyrGluLeuMetArgAspArgHisLeuAspGlu 606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3.2 HIGALCAAAGAAGAGGAGTATGAITCTAFTAGTATTGTATAACTGGGTGTTCATGCAG 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        687 ProHistLeProArgSerProTyrtgsPhcProSerSerProLesArglieProClyCly 706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   482 AACAICIAIAITICACCCCTGAAGAGICGATATAAAATTTGAGAAGGTGTGGGAAGAGA 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       142 ACAMAMATSACICCANGAICANSANICIINSIATOMATICSICANTUATICSISANILL 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    467 ArgleulysThrAsnileteudInTyrAlaSerTtrArgProproTtrLeaserProHe 686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 AAATCTAOGTCTTTCACTGTTTTATAAAAAGTGTATCGGCTAGCCTATGTCGGGCTA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                               130 g 198 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          124 459A 45 (1 832) X ALS97811 (1 727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.12e.124
1254.00
99.598
99.598
29.318
                                                                                                                                                                                                                                                                                                                                                                                                                               161 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       787 AspCin 788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             722 GATGAN 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                overy Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RUSELL 6
BU222227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;-;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ž,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
```

```
MEDITION ROLL RENA TOUR RAY DOUGHT ADDITION ROLL WAT DOUG ADDITION TASKED ROLL WAGER FUND AUGUST THAT THE WAGER FUND AUGUST THAT A TOUR THAT WAGER FUND AUGUST THAT A TOUR THAT WAGER FUND WAS A TOUR THAT WAGER FUND WAS A TOUR THAT WAS A TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note-"Ordan, testis, Vector, pCMV SFORT6; Site_1: NotI; Site_2: SalI; Cloned unidirectionally; oliqo-dT primed. Average insert size 2.5 kL. abbary curished for full-length clones and constructed by Life technologies. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                               Eukaryela, Metaroa, Chordata, Craniata, Vertebrata, Euteleustomi,
Mammalia; Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The L.M.A.C.E. Consortium (LLNL) DNA Sequencing by Agenceut Bloscience Corporation Clone distribution: MGC clone distribution information can be http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     i (Lases 1 to 880)
NIH-MCC http://mgc.nei.nib.gov/.
National Institutes of Health, Mammallan Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    81 ProSerSerSerHeSerThrGluileAsnSerAlaheuValheunysValSerTrprite 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               101 Throbber wil ruAlai ysClyCluVall euCiamet CluaspaspicuVall (contribetion)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 000 A00 POSAIAPOTACTGAAATAAATTCTGCATTGGTGCTAAAAGTTCTTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissuc_type "embryona! cardiacma, coll line"
/lab_host="DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches.
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plate: LLAM13279 row: i column: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone_lib-"NIH_MGC_92"
/tissuc_type "emlryJonal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-026-459A-35 (1.832) x 8Q22227 (1-880)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="IMAGE:6041563"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cqapbs-remail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              High quality sequence stop:
                                                                                                                                                       8Q222227.1 GI:20403627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.18e-122
1236.50
92.88%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     90.75%
                                    5', mRNA sequence.
BQDDDDD7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28.90%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. 880
                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              321 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                             numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                    EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                    NOTEINIEE
                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTENDES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL.
                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                           VELSHEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ئ
ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ζ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>ټ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           يَ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
```

```
EST 05-FEH-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HM454724 BST 05-PEB-2000
AGENITORI, 6402743 NIH_MGC_72 HGMG SAPITORS CONA CLORE IMAGE:5528814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /more-"organ: skin; Vector: pGMV-SPORT6; Site_1: Not1:
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Avrage insert size 2 kb. Library constructed by Life
rechnologies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
(a) CASAACAGSAGTGSACGGALAGCAACAACLAGAAAALGATGATACAAGATLATTGAAGTT 369
                                                                                                                                                                                                                                                                                                                                                                           241 LeutspilisasptysThrLeuGluThrAspSerTleaspSerPheGluThrGluArgThr 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                chan Library Proparation: Lite Technologies, The colm Library Arrayed by: The LM.A.G.E. Consorrium (LLNL.) INA Sequencing by: Agracourt Hossicience Corporation Clone distribution: MGC elone distribution information can be
                                                  181 LeufystyschuffischufysAsotheAspchuValLysAssaValTyrPhetysAssPhe 200
                                                                                                     201 HoftotheMetAsbSertiesGlytesValthrSerAsnGlytesProGlsValGluAsn 220
                                                                                                                                                                                                          421 AFACTITITATOAATICTCTTGGACTTGTAACAICIAATGGACTTCCAGACGTTGAAAAT 480
                                                                                                                                                                                                                                                                221 LeusertysAraTyrGluGluIleTyrLeuLysAsnLysAspLeuAspAlaArgLeuPhe 240
                                                                                                                                                                                                                                                                                                                      481 CLITCIAAAGGALAGGAAGAAALITALGELAAAALAAAGTGLAGALGCAAGAFFAFFF 540
                                                                                                                                                                                                                                                                                                                                                                                                                                 541 TTGGAFCATGATAAAACTCTTCAGATGTGATTCTATAGACAGTTTTGAAACAGAGAGA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    261 ProArqlysSerAsnLeuAspGluGluValAsnVallleProProFisThrProValArq 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            281 ThrValMetAshThrIleGlnGlnEenMetMetIleLeuAshSerAlaSerAspGln-Pr 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       400 oserðluAsnLeulle-SerfyrPheAsnAsnCysThrValAsn --ProLysGluSerf 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721 TEGAAAAATGEGATITEGTATTITAAGGAGTGGAGGAATGGAAAAGAAAGE 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIH MGC http://mac.ncl.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  419 letze - - TysargValtysAspf1eGlyfyrf1ePhe--- - 1ysGlutysPhe 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tound through the L.M.A.G.E. Consortium/LLNL at: http://mage.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "DH108 (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zrissue type="melanorie melanoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plate: LLAM12206 row, e column, 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tissue Procurement: ATCC/DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Abrejanism "Homo Sapiens"
Ab.xret - "taxon:9606"
Actono "IMAGE:5528814"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zelone lib-"NIH_MGC_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         High quality sequence stop: 647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               eqapbs r mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lawat ton/Qualitiors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BM453724.1 GI:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 845)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Inpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /lab_best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .8 ±
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RM45 17 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HIRAD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             T-HIFNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HM45.4724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEALURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PESHLT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   E HE S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          50,08
                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                           -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
```

```
LOCUS HM450031 10.23 bp mRNA linear EST 05 FEB-200.2 DEFINITION AGENCOURT_6393544 NIH_MGC_72 Homo sapieus cuna clone (MAGE:55,28037)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    594 AsnGluTyrGluLeuMetArgAspArgHisLeuAspGlnIleMetMetCysSerMetTyr 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                654 AspScrileHeValPheTyrAsnScrValPheMetGlnArqLcuLysIhrAshHeLvu 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    494 CysProLeuAsnLeuProLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerPro 513
                                                                                                                                                                                                                                                                                                                                                                                                                                        514. ValArgSerProLysLysLysLySerThrThrArgValAsnSerThrAlaAsnAlaG1n, 533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         188 GTAAGATCTCCAAAGAAAAAAGGTTCAACTACGCGTGTAAATTCTACTGCAAATGCAGAG 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              534 ThrGlnAlaThrSerAlaPheGlnThrGlnLysProLenLysSerThrSerLeuSerLeu 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              554 PheTyrLysLysValTyrArqLeuAlaTyrLeuArqLeuAsnThrLeuCysGluArqLeu 573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       614 GlylleCysLysValLysAsulleAspLeuLysFheLysllelleVulThrAluTyrLys 644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         644 Aspt.cuProHisAlaValClmClmThrPhetySArqValLeufletysSlmClmSlmTyr 653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               674 GluTyrAlaSerThrArgProPro---ThrLeuSerProlleProHislle ProArgSe 692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        454 LeuGluArqCysGluHisArgIleMetGluSerLeuAlaTipLeuSerAspSerProLeu 473
                                                                                                                                                                                                                                                                                                  474 PheAspt.culletysGlnScrt.ysAspArqGluGlyProThrAspHist.cuGluScrAla 493
                                                                                                                                                                                                                                                                                                                                                                                                     428 AATGAGTATGAAGTCALGAGAGAGAGGGALTTGGACGAAATLATGATGTGTGTALGTAL 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         728 GOOCTIACAAGITIIOOOLAGIIIICACOOTIIAAAAAIIGGTIGGGAAAGAAAACOATGC 787
                                                                                                                                                                                                                                                                8 GEGGGACGATGEGAACATGGAATGAGGAATGGGTTGGATGGCTGTCAGATTCACTTTA 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        692 rProfyrtys---PheProSerSerProtou---ArgitePro --- 11931yAsa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pouservative:
Mismatches:
1117
                                                                                       Matches:
                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-026-459A-35 (1-832) x HM453724 (1 H35)
                                                                                                                                                             Gaps:
 147 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           708 - HefyrlleSerProLeuLys 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            788 TATATTTTTCAACCCCCTGGAA 809
                                                                   1.4e-119
1208.00
92.938
91.048
   210 017
                                                                                                                                       28.24%
13
                                                                                                                        Hest Local Similarity:
 254 a
                                                                                                      Percent Similarity
                                                     Aliqnment Scores:
                                                                                                                                         Query Match:
   HASE COUNT
                                                                       Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BM450031
                    ORIGIN
                                                                                       Score:
                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                              qd
                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ĉ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ω
Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
```

```
(bases 1 to 914)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            257 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Source
                                                                                                                                                                                                                                                                                                                                                                                                  AA763411/c
                                                                                                                                                                                                                                                                                                                                                                                                                                       NOLLINIAGO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                             RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              · SOURCE
                                                                                                                                                                                                                                                         £
                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /lab_host_"DHIOR (phage-resistant)"
//note_nopan skin, Vector prWY Sports, Site_1: Not1;
Site_2: Sall, Cloud unidirectionally. Primer: 018p dT
Average insert size 2 kb. library constructed by Life
                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia: Eutheria: Primates, Catarrhini, Hominidae, Homo
                                                                                                                                                                                                                                                                                                           CDNA Library Arrayed by: The L.M.A.G.B. Consortium (LLNL)
DNA Sequencing by: Agencoult Bioscience Corporation
Clone distribution: MGC clone distribution information can be
tound through the L.M.A.G.E. Consortium/LLNL al:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                +17 LysValLysAsnIleAspLeuLycPheLycIleIleValThrAlaTyrLysAspLeuPro 636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97 ProSerSerProtectArd LeDredlyClyAshileTyrileSerProtectysSerPro 716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              717 19.00/straßerGtaßlyteaBrothaProthatysMetThaProArgSerArgHetten 736
                                                                                                                                                                                               National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5.7 SerThrArdProProThrLeuSerProTleProHisIleProArgSetProTytLysPhe 696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            302 TATAAAATTGAGAGGTPTGCAACAACAAAAATGACTGCAAGATGATGAGTTTA 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7.47 ValSerIleGlyGluSerPheGlyThrSerGluLysPheGlnLysIleAsnGlnMetVal 756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62 CATGCTGTTCAGGAGAAAAATTCAAAAGTTTTGATCAAGAAGAAGAGTATGATTCTATT 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 AAAGIGAAGAATAIAGACCTTAAATTCAAAATCATTGTAACAGCATACAAGGATCTTCCT 61
                                                                                                                                                                                                                                                                                              tife Technologies, inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type-"melanotic melanoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 281 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Average insert size 2 kb.
Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
                                                                                                                                                                                                                                                       Email: cqapbs r@mail.nih.gov
Lissue Procurement: ATCC/DCTD/DTP
                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13:09:026-459A-35 (1-832) x BM450031 (1-1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zelone_lib "NIH_MGG_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop: 643.
                                                                                                                                                       1 (bases 1 to 1023)
NiH-Moo http://mge.nci.nih.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:9606"
/clone="lMACH:5528037"
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             197 q
                                                                                                                                                                                                                                                                                                CONA Library Proparation.
                                   BM450031.1 GI:18499071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5.41c-109
1111.00
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 211 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25.978
mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .1023
                                                                                                 sublens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 114 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
                                                                              human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Allement Scores:
                                                                                               CROANICM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE CONT
                A. C.ESSELL IN
                                                                                                                                                                              AUTH AS
                                                                                                                                                         H. N. H. M. H. H. H.
                                                        KEYWORDS
SOURCE
                                                                                                                                                                                                               JUSTRANT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                     VERSTON
                                                                                                                                                                                               1111.5
                                                                                                                                                                                                                                      · · · MMENI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;-
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
```

```
linear EST 27 JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Marra, M., Hillier, L., Allen, M., Howles, M., Dietrich, N., Dubuque, I., Gessel, S., Kracha, T., Lacy, M., Lew, Martin, J., Morris, M., Schellenberg, K., Steploe, M., Tan, F., Underwook, K., Moore, B., Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLINA Was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note=Vector. pi773D-Pac (Pharmacia) with a modified polylinker, 1st strand cONA was prepared from mammary gland tissue from a lactaring female, and was then primed with a Not I - Onico(d) primer. Double-stranded cONA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not. I and Eco RI sites of the modified pi773 vector. Library is normalized. Library mas constructed by Bento Soarcs and M. Estima Honardo. "178 c 217 g 261 t.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Futheria; Rodentia, Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   914 bp mRNA linear EST 27 Jan-1 vw54s04.rl Soaros_mammary_gland_NMLMG Mus musculus cDNA clone INAGE:1247598 5 similar to qb:M15400 RETINOBLASTUMA-ASSUCIATED PROTEIN (HUMAN); qb:M26391 Mouse retinoblastoma susceptibility protein (MOUSE);, mPNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This clone is available royally thee through LLNL , contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                             757 CysAsnSerAspArgVall.cuLysArgSerAlaCluClySerAsnProPretySProLeu 776
                                                                                                                                                                          422 TGIAACTACCATGTGTGTGTGTATGTGTGTGTGAGGAAGCAACCCTCCTAAACCACTG 481
                                                                                                                                                                                                                                                                                                                   777 LystysteuArgPheAspTleGluGlySerAspGluAlaAspGlySerLysHLuL\epsilon_{
m CL_{\odot}}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4444 Porest Park Parkway, Box 8501, St. Louis, MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               817 TysClotysMetAshAspSc:MctAspThrSerAshTysCluClutys 832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone_lib="Soares_mammary_gland_NMLMG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Washington University School of MedicineP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MGI:661286
Seg primer: 28ml3 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /sex-"Temale (lactating)"
/Lissuc_type:"mammary qland"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1996)
Contact, Marra M/Mouse ESI Froject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: mouseest {watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  High quality sequence stop: 422.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref-"taxon,10090"
/elone="!MACD:1247598"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA763411.1 GI.2813158
```

```
622 CTAGGCLGLOTGACCALCGGAGTACAGCGATATAAACTTTGAGTCCGATCGTATTACCGT 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               460 ValMetGluserMetLeuLysSerGluGluGluArqLeuSerIleGluAsaPheSerLys 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             720 LysolyserThrThrArqValAsnSerThrAlaAsnAlaGluThrGluAlaThrSerAla 539
                                                                                                                                                                                            240 PhetenAspHisAspLysThrLenGInThrAspSerTICAspSerPheGluThrGInArg 259
                                                                                                                                                                                                                 800 ProSetGluAshLenfleSerlYrPheAshAshCysThrValAshProLysGluSerfle 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420 LentysArqValtysAspileClytyrHePhetysGlutysPheAlatysAlaValGly 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      >6.2 GTGATGGAATCCATGCTTAGATCAGAAGAAGAAGGTTTGTCCATTCAGAATTTTAGCAAA 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       880 LeutzeuAsnAspAsnilePheHisMetSert.eutzeuAlaCysAlat.euGluValValMet. 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       400 AlaThrTyrSerArgSerThrSerGluAsnLeuAspSerGlyThrAspLeuSerPhePro 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420 FrpileLeuAsaValLeuAsnLeuLysAlaPheAspPheTyrLysValileGluSerPhe 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               440 HetysAlaGluGlyAsnieuThrArqGluMetHetysHisleuGluArgCysGluHis 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          460 ArdIleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysGln 479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480 SertysAspAraGluGlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuPro 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                000 LenglinAshAshHisThrAlaAlaAspMetTyrLenSerProValArqSerProLysLys 519
                                                                                                                                                                                                                                                                      240 th ProArqtysSerAsuLeuAspGluGluValAsuVall1eProProHisThrProVal 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85 AGAACT PORCEGO AAAATTO TOO TOO AAAAA AGAGACACACAAAACAACTICAGGC 26
                                                                                                                                                                                                                                                                                                           856 ACCCCACGGAAAABCCACCTTGT-GAAGCGCCAAACCGGTTACTGCCCCCACCCGGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HTTH TELLHITHTHITHTHITHTHITHHITHHITHHITH
                                                                                                                                                                                                                                                                                                                                              280 ArqThrValMetAsuThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAspCln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7.47 COCTEAGAATNTETGIT TECCTCTCAATATTGGGGGGGGGGTAACGGAAAAATTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            678 CTAAAGGGGG AAGGAGGT GGGGACATCCTTAAAGAGAAAGTTTCTA - - ACGCTGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
Conservative:
Mismatches:
                                                                                            Indels
                                                                                                            Gaps:
                                                                                                                                                     US 09 026 459A 35 (1 832) x AA763411 (1 914)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40 PhestinihrdiniysProbantys 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25 TTGGATACTGAGAAGGGATTGAAA 2
              4, 5e 104
1056, 50
                                                   82,14%
75,97%
24,70%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rest Local Similarity:
                                                   Percent Similarity:
Alliquinent Scores:
                                                                                          Corry Match:
DB:
                  FIFE X
                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \frac{2}{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   جَ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \geq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \hat{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
```

```
Anote—"Andam Endin, Vector, privilegid to ist strand cDNA was primed with a NoII-oliquo(dT) primer. Five prime end enriched, double-stranded clNA was discussed with NoI I and cloned into the NoI I and Eco MV sites of the pcMVSENER by Vector. Library was normalized. Library was constructed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AL563757 LTL_NELGOL_NBC4 Homo Sapiens ChNA close CSalpon7805 4
                                                                                                                                                                              Eukaryola; Metazoa; Chordala; Craniala; Verlehrala; Enteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            144 LysThrAlaValIleProIleAsnGlySerProArqThrProArqArqGlyGluAsnArq 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ŧ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  611 ATGAATTCTCTTGGACTTGTMACATCTWATGGACTTCCAGAGGTTGAAATTCTTAAA 552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      224 ArgTyrCluClulleTyrLeulysAstiysAspl.cuAspAlaArqLa.Fh.La.AspHis. 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         164 SerAlaArgileAlaLysGlnLeuGluAsnAspThrArgileileGluValLeuCysLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             204 MetAsmSerLeuGlyLeuValThrSerAsmGlyLeuGrooluValGluAsmLeuSerLys
                                                                                                                                                                                                Mammalia; Eutheria: Primates: Catarrhini; Hominidae; Homo.
1 (bases 1 to 792)
                                                                                                                                                                                                                                                                                                    Genoscope Centre National de Sequencaque
BP 191-91006 EVRY cedex France
Email: segicfaqeioscope cus.fr, Web : www.qenoscope.cus.fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.1. W. H., Gruber, C., Jessee, J. and Polayes, D. Full Tength cDNA libraries and normalization Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="neuroblastoma cells"
/lab_host="bH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="CSODD007YA05"
/clone_lib="LHI_NFL001_NBC4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
                                                                                                                                                                                                                                                                                                                                                                             1 792
/organism-"Homo sapiens"
/db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-026-459A-35 (1-832) x AL563757 (1-792)
                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                      AL563757.1 GI:12913464
                                                                  prime, mRNA sequence.
AL564757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /sex-"male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1043.00
84.548
81.898
                                                                                                                                                                                                                                                                                       Contact: Genoscope
                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity:
                                  AL56 1757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
               AL563757/c
LOCUS
                                                   DEFINITION
                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.:
                                                                                                                                                                                                                                                     TITLE
JOURNAL
RESULT 10
                                                                                       ACCESSION
                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                    AUTHORS
                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                               PEATURES 1
                                                                                                        VERSION
                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      :
;
```

```
Homo sapiens
                                                                                                                                                                                Best Local Similarity:
                                           228 a
                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   379 Lys 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601 AAA 603
                                                                                                     Alignment Scores:
                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PEFINITION.
                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HE082846/C
                                                                                                                          ુ
્ર
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PEPEPFNCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                     d
                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ੋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       :7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       605 bp mRNA linear EST 14-AUG-2001
PMETE/14PDP92_c1 313 (Synco,m hlos2) Homo Supiens cENA cloude
ALS94833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Research Center (DKF2); Email s.wiemann@dk[z-heidelberg.de; sequenced by BMF2 (Blomedical Research Center at the Charite, Herlin/Germany) within the CDNA sequencing consortium of the German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
Bužaryvia, Marazas Chardata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Patharia, Primatos, Catarrhini, Hominidae, Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No.81 sequence available.
This close (EMERPALIENCE) is available at the PZPD in Bellin
Please contact the EMERIE Bessourcemention, Henkunskey 5, 14059
Berlin-Charlottenburg, GFPMANY: Emall: Alonewiryd de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               this is the 5' sequence of the clone insert
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
                                                                                                                                                                                                                                                                                                                 244 Asplys belowed albraspsor Hoaspsor Phoclethrolnarythrolang ps 263
                    264 SerAsnLeuAspGluGluValAsnValIleProProHisThrProValArgThrValMet, 283
                                                                                                                                                            284 AshThriledinGluTeuMetMetIleLeuAshSerAlaSerAspGluProSerGluAsh 303
                                                                                                                                                                                                                                           3.44 Lent Heser HyrPhcAsnAsnCysThrVa | AsnProLysCluSer HolloullysArgVa | 3.23
                                                                                                                                                                                                                                                                              *11 YEGITIT:XYWTITITAGGACTGCACAGTGAATCCAAAAGAAAGTATACTGAAAAGGGG 252
                                                                                                                                                                                                                                                                                                                                                                                                 44 dluffedlyserSinArqTyrLysLeuSly--ValArqLeuTyrTyrArqValMetGluS 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              46 etMetLeuLysSerGiuGluGluArgLeuSerIleGlnAsnPheSerLysLeuLeuAsn-382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 605)
Knichter K. Beyer A. M.Wes.W., Well, R. and Wiemann.S.)
EST (Koberer, K., Beyer, A., Mewes, H.W., Well, B. and Wiemann, S.)
Contact: Koehrer K.
                                                                                                                                                                                                 471 GACAYTWICCAACAATTAATGATGTTTTTAAATTCAGCAAGTGTTCAACCTTCAGAAATT 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             oki AspAsulioPhoHisMorSorLourouAlaCysAlaLeuGluValValMetAlaThrTyr 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   131 COATGOTITATICAGAAGAAGACGATTATCCAATTCAAAATTTTBGCACACTTCTGAATS 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Am Elopterspitz 18a D-92152 Martinsried, Germany
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /ologo_lib.malk (synonym: bloo2)m
/dov_stage="adolt"
/lab_host="oHlOB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /Organism="Homo sapiens"
/db_xrst="fax a gene"
/ lev "rgropyranger"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
1. .605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Al.599633.1 GI:15162921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jenome Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            403 SPFArdSer 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11 GRAGIAAGI 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A1.599633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MIPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIVATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
ALSOHALS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TORRNAT COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSIEN
AUTRIGUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SHIRKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E. CHS
                                     Ξ
                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                           ą.
```

```
BEGBER46
POTCHEGALITATION OF OUR BEGBER FOR SUPERS SPRING SEQUENCE.
BEGBER846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dias Nebolk., Gardia Cottealk., Verjovski Almeidals., Hriones.M.R.,
Nagai,M.A., da SilvalW. Jr., ZagolM A., Bordin,S., Costalk.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukarjota, Metajoa, Chuidata, Chariata, Vertebrata; Esteleostomi;
Mannaila, Eucheita, Frimates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 694)
Dias Neto,E., Garcia Currea,E., Verjoyski Almeida,S., Brionos,M.R.
/note-"Vector: pTriplbx2: Site_1: SfilA; Site_2: SfilB; cDNA-collection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               179 GlavalLeuCycLysGlaHloGlaCysAsmIleAspoluValLycAsmValTyrFheLys 198
                                                                                                                                                                                                                                                                                                                                                                                                                                           279 ValArgThrValMetAsnThrIleGInGInLeuMetMetIleLeuAsnSerAlaSerAsp 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361 CAACCTTCAGAAAATCTGATTTCCTATTTTAACAACTSCAGAGTGAATCGAAAGAAAGI 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 319 (leten)gsArgValtgsAspt/edlgggrfffffchetgsClutgsPhcAtatgsAlaVal 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      359 ArgValMet@luSerMetLeuLysSerGluGluGluGluArgLeuSerlleGlnAsnPheSer 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             199 AsnPhelleProPheMetAsnSerLeuGlyLeuVallhrSerAsnGlyLeuProGluVal 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 GAAAATCTTTGTAAACGATAGGAAGAATTTATGTTAAAAATAAAGATCTAGATGCAAGA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 239 LeuPheleuAspHisAspLysThrLeuGlnThrAspSerlleAspSerPheGluThrGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    259 ArgwhrproArglysSerAsnLeuAspGluGluValAsnVallleProPreHisThrPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches:
Consertative:
                                                                                                                                                                                                   Mismatches:
                                             105 g 179 t
                                                                                                                                                                                                                        Indels:
                                                                                                                                                                                                                                                                                      US-NG-N26-459A-35 (1-832) x AL599633 (1-605)
                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BE082846.1 GI:8473151
                                                                                                                                2.33c 10
1037.00
100.00%
                                                                                                                                                                                                   100.00%
                                             076
                                                                                                                                                                                                                     24.24%
```

us-09-026-459a-35.rst

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                  q
                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                    ं
                                                                                                 ć
                                                                                                                                              qq
                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zhotë "arqan, breast; Vector: purlB; Site_1: Smal; Site_2: Smal; A mini-library was made by cloning products derived from oRESIES PCR (U.S. Letters Patent application No. 196
Goldman, G.H., Garvalho, A.F., Matsukuma, A., Baia, G.S., Simpson, D.H., Bronstein, A., deoliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare, M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                               (http://www.lodwid-rig.lt/Shribpis/gotfinmiz.pl.rt/-wrz-m/z R19642-270
200 014-e06xis 2000 02 21414-1)
                                                                                                                                                                                                                                                                                                    Tell: 55-11-2704922
Edwis 55-11-2707001
Edwis: Sasimpsortelndid.org.br
This sequence was derived from the PAPESB/Lick Human Cancer Genome
Project. This entry can be seen in the following URB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ,716 - Ludwig Institute for Cancer Research) profiles into the pUC B vector. Reverse transcription of tissue meMA and club amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                          Rua Prof. Antonio Prudente 109, 4 andar, 01509 010, Sao Paulo SP,
                                                                                            Shotqun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       676 CACTOCACATION CONAAAAAAAAGTALACTIGAGAAGTIGAAGGATATACATC 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       130 PhylyschutzskaalatysalaValGlyGlnGlyCysValGlulleGlySerGlnArg 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                450 1711/28/cod1yValArqLos1yrTyrArgValMetG1uSerMetLos1,ysSerG1uG1u 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 55 TACAAACITGGAGITGGCITGIAIATGGAGIAATGGAAICCAIGCITAAATGAGAA 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3.0 SluArqLeuSerlleGluAsuPheSerLysLeuLeuAsuAspAsuIlePheHisMetSer 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      410 TouAspScrGtythrAsptonScrPhoProTrpHqtquAsnValTeuAsnLeuiAsAla 429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  410 AssrysThrVilAsnProtyssluSerfleLeutgsArgValLgsAspfleGlyTyrfle 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                497 GAAMATTA FORTHOAAATTI LAGGAAACTTO LOAATGACAAGATTI FITGATATGTOF. 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19tt LeuLeuAlaCysAlaLeuGluValWetAlaThrTyrSerArgSerThrSerGlnAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              922
                                                                                                                                                                                                                                      andwig Institute for Cancer Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Inde is:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /orqanism "Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US 79 026 459A 45 (1 842) x BEUR2846 (1-694)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence start: 58
High quality sequence stop: 669.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Atb. xrest "taxon; 9606"
                                                                                                                                                                                                                  Laboratory of Canori Conetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/gualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zelone lib-"Bi0642"
Zdev_stage:"Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              127 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Seq primer: puc 18 torward
                                                                                                                                                                                           'ontact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.65c 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1040.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          46.34%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94,95%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24.088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6.94
                                                                                                                     Sequence Lags
                                                                        Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity:
                                                                                                                                                                  1020204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Owery Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -11-G. NO. :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HASE COUNT
                                                                                                                                         PACIFICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PEATURES
                                                                                               1111
                                                                                                                                                                                         MMIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
```

```
Melton, D., Meadows, A., Clilton, S., Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A., Schmitt, A., Theising, R., Ritter, E., Ronko, L., Bennett, J., Cardenas, M., Gibbons, M., McCaun, R., Cole, K., Tsadareishvill, R., Williams, L., Jackson, Y. and Howers, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     UST 14 MAR 2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Endocrine Pancreas Consortium
Barvard University, Howard Hoques Medical Institute
Dept of Molecular and Cellular Hiology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Plasmid Library Kit (Life Technologies), clowa made by ollyo di priming. Size selected by column fractionation:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: dmelton-bjohp.harvard.edu Libraries were constructed by Lt. footalas Melton DNA sequencing by: Washington University Genome Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           For information on obtaining a clone piease contact: Juliana Brown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (brown das.harvard.edu)
This sequence now available from the IMAGE consortion, for clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /lab_host_"DHHOB"
/note-"organ: Pancreas: Vector: pSPoRTL: Site_L: Not 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AW583181 623 bp mkNA linear ESL 13 MAK 2
LaliMose stan clone
IMAGE:568049 5' similar to db:M15400 RETINOHASTOMA ASSOCIATED
PROTEIN (HUMAN); db:M26391 Mouse relinablastoma sassocytibility
                                                                  HELLITTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELlettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellet
                                                                                                                                                                                                                                                                                                                                                                                                                                                              470 AspSerProteuPheAspLeu11etysGluSerLysAspArqGluGlyProthtAspHis 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       490 LeuGluSerAlaCysProLeuAsnLeu-ProLeuGlnAsnAsnHisThrAlaAlaAspMe 509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Site_2: Sal 1: Library constructed using SuperScript
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
430 PheAspPheTyrLysVallleGluSerPhelleLysAladladlyAsubeuThrArqGlu
                                                                                                                                                                                                                                     450 MetlleLysHisLeuGluArgCysGluHisArqfleMetGluSerLeuAlalrpLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       average insert size 1.08 kb. Primary Hibrary, unamplified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib="Human Pancreatic Islets"
/tissuc_type="Islets of Langerhans"
/dov_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          intomimage.linl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ,K., Tsagareishvili,K., Williams,I.
WashU-Harvard Pancreas ESI Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Seq primer: -40kF from Gibro
High quality sequence stop: 446.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein (MOUSE);, mENA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone- "IMAGE: 56 38049"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xre1-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AW583181.1 G1:7260125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 623)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         617-495-1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           617-495-8557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          orders contact:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MA 02138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hчшап.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
```

1 of hers

186 1

109 4

.) +6,

a

234

```
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fred. No.:
             TITLE
JOURNAL
                                                                                                                                                                                                                 FEATURES
                                           COMMINI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ĝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ٥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutleleostomi; Mammalia; Eutheria: Pedentia: Sciurcanathi: Muridae: Muridae: Musinae: Musinae: Musinae: No. I to 871, Marra, M. Hillierii., Allen, M., Bowles, M., Dietrich, N., Dubuque, T Geisel, S., Kucaba, E., Lacy, M., Le, M., Martin, J., Morris, M.,
                                                                                                                                      4)4 nProtyseluSerfletentysAryValLysAsplleGlyTyrfleFheLysGluLysFh 334
                                                                                                                                                                                                                                                                                                               244 pleudspaladigton/hotonAspHisAsptysThrteaClnThrAspSerileAspSe 254
                                                                                                                                                                                                                                                                                                                                                                       254 rPheGlathrGlnArqThrProArgLysSerAsnLeuAspGluGluValAsnValIlePr 274
                                                                                                                                                                                                                                                                                                                                                                                       274 oProffisThrProValArgThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAs 294
                                                                                                                                                                                                                                                                                                                                                                                                                                            294 nSerAlaSerAspGlnProSerGluAsnLutileSerTyrPheAsnAsnCysThrValAs 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         **4 eAlaLysAlaValGlyGlnGlyCysValGluIleGlySerGlnArqTyrLysLeuGlyVa 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               454 lArgheuTyrTyrArgValMetCluSerMetLeuLysSerGluGluArgheuSerll 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
                                                       Mismatches:
             Length:
Matches:
                                                                      ndels:
                                                                                   Gaps:
                                                                                                             09 026:459A:35 (1-832) x AW583181 (1-623)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA763485.1 GI:2813232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              474 eGlnAsnPheSerLysLeu 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6.3 [CAAAA1111AGCAAACT1 62]
                       1016.00
98.07*
97.10*
23.75*
             4.538 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 house mouse.
                                                     Host lowal Similarity:
                                         Percent Similarity:
Aliqument Scores:
                                                                 Suery Mateh:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No I I I N I HH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA76448570
Lanus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERETION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEFEREN'E
              100
                                                                                                                                                                                                                                                                                 <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'n
```

```
Another Pector, F7773D Fac. (Pharmacia) with a modified polylinker; ist strand cDNA was prepared from mammary dand tissue from a lactating female, and was then primed with a Not i - uliyo(dT) primer; Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not modified to Library is normalized. Library is normalized. Library modified pT773 vector. Library is normalized. Library was constructed by Bento Soares and M. Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                              This close is available regalty free through LAML, a contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               260 ThrProArglySSerAsn...LeuAspGluGluValAsnVallleProProHisThrProV 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299 inProSerGluAsniculleSerTyrPheAsnAsnCysThrValAsnProLysGluSert 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        319 | C.LoulysArgValtysAspileClyTyrilCPhclysClutysPbcAlatysAlaValG 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 684 HITTAGAGGTTAAAQGTTGTGTGTGCGCAGGCTTTAAAAGAGAGGGCTTGTTAAGGTGCTGC 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         359 rqValMetGluSerMetLeuLysSerGluGluGluArgLeuSerIJeGlnAsnPheSerl, 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            860 AGCCCAAGGAAAAAAAAAGAGGGAGGGGGGAGATTTACCCCCCACAT 804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   279 alArgThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAspG 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         803 PTGG-GACATTTTGATACTACTACACA TAGGGGGTTTTTAATTTCCCCAAGTATCA 745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             744 GOCCATCCSAAAATCTTGTTGCTTCCTTCCAIA11GTCCCG11ACCTCCAAAGAACAATC 685
Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, H.
Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and
Waterston, R.
                                                                                                                                                                                                                                                 MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="Soares_mammary_aland_NMLMG"
/sex="female (lactating)"
/tissuc_type="mammary gland"
                                                                                                                                                                                                           Washington University School of MedicineP
4444 Forest Park Farkway, Box 8501, St. Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                          MGI:661353
Seq primer: -28ml3 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                       Unpublished (1996)
Contact, Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                     mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-026-459A-35 (1-832) x AA763485 (1-871)
                                                                                          The WashU-HIMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      High quality sequence stop: 495.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_aref-"taxon:10090"
/clone="IMAGE:1247665"
                                                                                                                                                                                  WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissuc_type="mamm/lab_host="DH10H"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.63e-98
1013 00
80,348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                74.488
23.688
9
                                                                                                                                                                                                                                                                          Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .871
```

Note: this is a NIH_MGC Library."

204 4

214 0

307 a

BASE COUNT

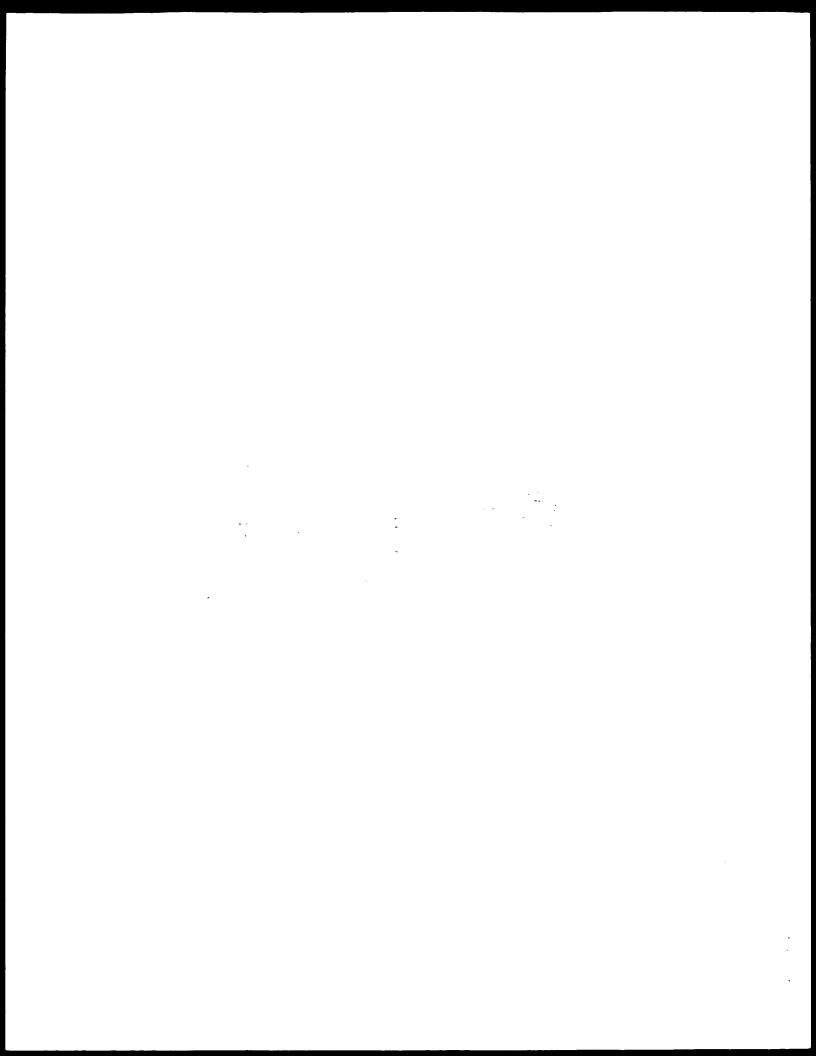
ORIGIN

1.47

```
EST 13 FEB 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Verfebrata; Euteleosfomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Anota Torquan: Liver, Vector: pdMV-SPORIG; Site_1: Not1; Site_2: Sall: Cloud unidirectionally; olique-df primed. Average insert size 1.7 kb. Library enriched for Average insert size 1.7 kb. Library enriched torull pendin clones and constructed by Libr Technologies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         602364278Fl NIII_MGC 90 Home Sapiens CDNA clone IMAGE:4472611 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NIH-MGC http://mqc.nci.nih.qov/. National institutes of Health, Mammalian Gene Collection (MGC) ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              chNA Library Preparation: Lite Technologies, Inc. cons. Library Arrayad My: The L.M.A.G.E. Consortium (LLNL) INNA Sequencing by: Incyte Genomics, Inc. close distribution: MGN close distribution information can be
504 CACTECTAAATGACAACATGTTTGATATGTCTNTACTGGCCTGTGGCTCTTGAAGTTGTAA 445
                                                                                            199 et Alathr 17r Ser Ary Ser Clin Ser Clin Aspl. Cap. A 19
                                                                                                                                   HILLEHTITTETTITTETTITTETTT TILE:::HELLÜTLILLÜTLILÜTLILLÜTLILLILLE AVGENEGALGEGALGEGETTGG 385
                                                                                                                                                                                                                                                                           419 rofrpileLeuAsnValLeuAsnLeuLysAlaPheAspPheTyrLysValileGluSerP 439
                                                                                                                                                                                                                                                                                                                           439 helletysAlaGluGlyAsnLeuThrAraGluMetlletysHisLeuGluAraCysGluH 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    459 isArqlleMetGluSerLouAlaIrpLouSerAspSerProfeuphoAspLouTleLysG 479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              THEFFER HELLER H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      479 InSertysAspArgGluGlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuP 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       499 roleouSluAsuAsnHisfhrAlaAlaAspMetfyrLeuSerPreValArgSerPreLysL 519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              519 ystyscilyserthrihrardvalAsnserthralaasnalacinihreitalaithrsera. 539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             147 CTCPCCAGGGTAACCATACTGGAAGAAATATGTATGTTCTCCCTCTAAGATCTCCCAAAGA 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87 AAAGAATHOTATTAGAGGTGTAAATTGGGGGAATTAGAGAGACAGAGGAGCTGAG 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /fissue_type="adenocarcinoma, cell line"
/lab_host "OH108 (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plate: LLAM10293 row: 1 column: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib."NIH_MGC_90"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          High quality sequence stop: 633.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  वेद हर्द
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone-"IMAGE:4472611"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Adb, xret "taxon: 9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: eqapbs:ramail.nih.gov
lissue Procurement; AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       539 labbedlafhrdlafysprobetlys 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27 COLONA HITTER LITTER STATES 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BG253543.1 GT:12763359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              http://image_lint_qev_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (pases 1 to 422)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mena sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14527,4544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HC225.3543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOHLOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PESULT 15
[8325.454.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JUNEAU.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INHWWO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ξ
                                                                                                                                                                                                                                                                                                                                                             =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \stackrel{>}{>}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ĩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
```

```
762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            583 HelleTrpPhricuPcClnHisThricuClnAshCln 1716hubanMcAndAspAr 602
                                                                                                                                                                                                                                                      522 piccigsPhetysHelleValThrAlatyitysAsplachisAlaValolidinih 642
                                                                                                                                                                                                                                                                                120 CCTTAAATTCAAAATCAT GTAACAGATACAAGGALCTICCTCATGCTGIIC AGGAGAC 178
                                                                                                                                                                                                                                                                                                                                                                                                                            707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               702 qllebrodlydlyAsmilelyrileSerProteutysSerPrefyrtysileSerdbadl 72z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                417 TCTGCCAACACAACAAAATGACTCCAAGATGAGAATGTTAGTATAATTGTTGAATG 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      762 HeutysargSeralaGluGlySerasnProProtysProLentystysteuarqPheas 782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         782 pileGluGlySerAspGluAlaAsp-GlySerLysHis-LeuProGlyGluSerLysPhe 801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      596 TATTGAAGGATGAGATGAAGGAGAGAAGTAAAGATOGTOGTOGAGGAGAGTOTAAATOT 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               802 GInCinLysLeaAlaCluMetibrSeribrArathrAraMetGlubysThupsMetAsh 821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            656_CAGGCAGAAATGGGGAAATGAGTTCTATTCGAAAAGAAATGGCAAAGGGGAAGTGAAT_715
                                                                                                                                                        582 TheuSerProlleProHislleProArdSerProTyrLysPheProSerSerProLeuAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             742 rPheClyThrSerClutysPheClntysTleAshClnMetValCysAshSerAspArgVa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         822 AspSerMetAsplhrSerAshlySeludlurys 832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   716 GGAAGCTGGGTACCTCCACACACGGAAAGAAAG 748
                                                                        Indels:
                 Length:
                                                                                                             US-09-026-459A-35 (1.832) x BG253543 (1.922)
                            1004.00
90.51%
88.54%
23.47%
                                                        Rest Local Similarity:
                                         Percent Similarity:
Aliqument Scores:
                                                                     Query Match:
                Pred. No.:
                             Score:
                                                                                                                                         ô
                                                                                                                                                                    q
                                                                                                                                                                                                  Š
                                                                                                                                                                                                                           Q
C
                                                                                                                                                                                                                                                      :
:
                                                                                                                                                                                                                                                                                겶
                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                      2
                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                            ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
```

Search completed: January 19, 2004, 05:05:58 Job time : 1852.73 sees



```
January 16, 2003, 15:20:22 ; Search Lime 2729.72 Seconds (Without alignments) 18469.506 Million cell updates/sec
                                                                                                                                             1 GOOGLOAIGICAAGACIGII......AAAIGAGGAITAIIGAIAGT 3113
                                                                                                                                                                                                                                      32308132
GenCore version 5 ) 4 ^{\circ} Copyright (c) 1994 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                   lotal number of hits satisfying chosen parameters:
                                                                                                                                                                                                            15154056 seqs, 8097743376 residues
                                                                                                                                                                                                                                                                                                 Fost processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                nucleic search, using sw model
                                                                                                                                                                                    Gapop 10.0 , Gaprext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                em_gss_other:*
em_gss_rod:*
em_gss_rod:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           em_gas_tun;*
em_gas_fun;*
em_gas_mam;*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            em_gss_hum:*
em_gss_inv:*
em_gss_pln:*
em_gss_vrt:*
                                                                                                                     US 09 026 459A 46
4113
                                                                                                                                                                                                                                                                           Maximum bB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                              em_estba:*
em_esthum:*
em_esthum:*
em_estba:*
em_estpa:*
em_estpa:*
em_estpa:*
em_estpa:*
em_hte:*
qb_estp:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       om_estun;*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    db_btc:*
db_est4:*
db_est4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qb_est5:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qb_est2:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  db_dss:*
                                                                                                                                                                        TORINI LIY_NOT
                                                                                                                                                                                                                                                              Minimum DB Seq Tength: 0
                                                                                                                                                                                                                                                                                                                                                 EST: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lities
Perfect scores
                                                                                                                                                                        Secorated tables
                                                 ow muchin
                                                                                                                                                                                                                                                                                                                                                   Database :
                                                                                                                                                  Sequence:
                                                                                                                                                                                                             Sear ched:
                                                                        Putte on
```

Pred. No. is the number of results predicted by chance to have a score areafer than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		Description	BM450031 AGENCORET	HM561083 AGENCOURT	BC439221 ACHNOOCKE	BCDD0275 ACENCOURT	BM475603 AGENCOURT	BMS45881 AGENCOURT
SUMMARIES		ID	BM4 500 31	BM561083				BM545881
		80	~	-	7	7	Ť.	~
		Query Match Dength DB ID	1024	1051	1901	π π	1001	11.22
	æ	Ouery Mateh			5.7.			
		aloos	910.2	909.4	G. H	844.8	751.6	752.4
		Kristi T		7	~	₹	J.	٠,

```
3
                                                                                                        Site_2: Salf: Cloned unidirectionally. Primer: Oligo dr. Average insert size 2 kb library constructed by Life.
                                                                                                                                                                                                                                                                                                        1701 CANAGTGAAGAATATAGACTTAAATTCAAAATGATGIAAGAGGATAAAAGGATGTTGG 1760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1761 IGAIGCIGIICAGGAGACATTCAAACCTCTTTGATGAAGAAGAAGAGGGGGTTGTAT 1820
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1821 IAIAGIAITOTATAAGIOGGIOTICATGAAGAAAACAAAGIAAITITGGAGIAGO 1880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1881 TICCACCAGGCCCCTACCTIGICACCAATACCTCACATICCTCGAAGCCCTTACAAGIT 1940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1941 ICCTAGITGACCCTTACGGALTCCTGGAGGGAACAICTALAITITGACCCCTGAAGAGICC 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001 ATATAAAATTTCAAAAGTGGGGGGGGGGGGGAAAAAATGAGGGGAAGGGAAAATGT 2060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             224) AGGAGACTETYAAATTECACTGGAAATTGGAAATGACTGCTCTCTACTGCAACGAATGCA 2300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2.3.1. AAAGCAGAAATGAA FGATAGCATCGATACTTCAAAGAGAAGAGAAAATGACGAFGTCA (2.36)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2421 TAACTITCCCAGGIICIGITIAIGGCCACATIAAIAICIICAGCICIIITTGGGGATAT 2480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       248) AAAAIGIGGAGAIGCAATTGFTT - GGGTGATTTCCTAAGCCAGTTGAAATGTTAAATTGTTT 2538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 TCATGCTGTTCAGGAGGATTCAAACGTGTTTTGATCAAAGAAGAGGAGTATGATTCTAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541 AGGAGAGTCCAAATTTCAGCAGAAACTGGCAGAAATGACTTCTACTCGAACGGAATGCA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           721 TAACTTTCCCAGGTTCTGTTTATGGCCACATTTAATATGTTTTAAGGTTTTTTTGGGAGTAT 780
                                                                                                                                                                                                                                                                       6; Gaps
                                                                                                                                                                                                                                                                                                                                            1 CAAAGTGAAGAATATAGACCTTAAATTCAAAATCATTGTAACAGCATACAAGGATCTTCC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Schre 910.2: DE 13: Length 1023;
Pred. No. 3 4e 165;
                                                                                                                                                                                                                                                                                                                                                                                                   43; Indels
                                                                                       /lab_host-"DH10B (phage-resistant)"
                                                   /clone_lib="NIH_MGC_72"
/tissue_type-"melanotic melanoma"
                                                                                                                                                                                281 t
                                                                                                                                                                                                                                                                       0; Mismatches
/orqanism-"Homo sapiens"
                                  /clone-"IMAGE:5528037"
                 /db_xret="taxon:9606"
                                                                                                                                                                                197 g
                                                                                                                                                           lechnologies."
                                                                                                                                                                                                                                   29 2%;
95,2%;
                                                                                                                                                                                                                                                                    Matches 972; Conservative
                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                334 a
                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                        LOCa!
                                                                                                                                                                                BASE CLUNE
                                                                                                                                                                                               NISIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \geq_{\gamma}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \stackrel{>}{>}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          =
```

```
1051 kp mRNA linear EST 10 FEB 2002
AGENCOURT_6566133 NIH_MGC_67 Homo sapiens CDNA clone IMAGE:5550905
5', mRNA sequence.
HM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note-"Organ: cyc; Vector. pCMV-SPORT6; Site_1: Not1; StLe_2: Sall, Glund unidirectionally. Primer: clino dI. Average insert size 1.75 kb. Library constructed by Libe Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metambai Chordata, Cramiata, Vertebrata, Exteledistemi;
Mammalia; Eutheria; Primates, Catarrhini; Hominidae: Homo.
                                                                                                                                                                                                    2539 CTTATTTATATATATATATGAAAATCTTGTGAAAATCCTGCCGATTTAAAAAGTTGTAGGAAA 2598
                                                                                       2599 TTGTTT-CCTCTT-CCAAAG1AAAATTGCTG1GCTTTATGGATAGTAAGAATGG----CCC1 2654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9/9 AATTTTAGCAAACTTCTGAATGACAACAITTTTCAIATGTCTTTATTGGCGTGCGTCTI 10/8
                          901 TETTE CULTIONANIANAAATGOISTOONIATEGAIAGAAAAAAAGOONIA 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA Library Preparation: Life Technologies, Inc. CNNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) UNA Sequencing by: Agencourt Bioscience Corporation Clonc distribution. MGC clonc distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NIH MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (M3C)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             859 AAAGCTGTGGGACAGGCTTGTGTGGAAATTGGATGAGGCGATACAAACTTGGAGTTCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    919 TEGERTERCEGRATAREGRARICCRICATGCTTARARICAGAAGAAGAACGATTATCCATTCAA 978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ATAGETGTGGGAFAGGGTTGTGTGGAAAITGGATGACAGGGATACAAAGTTGGAGTTFGG 60
                                                                                                                                                                               2655 ACACTGGGAGTGGTGATAAGGCAGGGTGTGAGTAGTTTGGGTTGTGTTTTGTAGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 13; Length 1051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Frdela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone_lib-"NIH_MGC_67"
/tissue_type="retinoblastoma"
/lab_host-"!H108 (phage resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ر
د ع
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29.2%; Score 909.4; DB 13 98.4%; Pred. No. 4.9e~165;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            http://image.llnl.gov
Plate: LLAM12263 row: m column: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        299 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism-"Homo sapiens"
/db_xref "taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="IMAGE:5550905"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cgapbs:r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     197 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BM561083.1 GI:18806043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 1051)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        221 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Occservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          guery Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     330 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     uman.
                                                                                                                                                                                                                                                                      2715 A 2715
                                                                                                                                                                                                                                                                                                                 1021 A 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mainnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                         BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                SLUCI
                                                                                                                                    ź
                                                                                                                                                                                                                         ż
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>د</u>
                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
BQ4 9221
AGENCOURT_7766562 NIH_MGC_92 BOMO SAPIENS CDNA clone IMAGE:6015480
                                                                                         1039 GAGGITGTAATGGGCACAIATAGCAGAAGTACATCTCAGAATCTTGAITCTGGAACAGAT 1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1159 ATCGAAAGITTTATCAAAGGAGGAACITGACAAGAGAAATGATAAAAAGATTTAGAA 1218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1219 CGATGTGAACATCGAATCATGGATGCCTTGCATGGCTCTCAGATTCACCTTTATTGAT 1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1309 CTTAATCTTCCTCTCCAGAATAATCACAGCAGACAGATATGTATCTTTCTCCTGTAAGA 1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1399 TOTOCAAAGAAAAAAAGTTCAACTAGGGTGTAAATTCTAGTGCAAAATGCAGAGAGACACAA 1458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1459 GCAACCFPAGCCFFCCAGACCCAGAGCCAFFGCAATCFACTCFFCFFFFFTTTTTAF 1518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1519 AAAAAAGTGTATGGGGTAGGTAGTGGGGGTAAATAGACTTTGTGAAGGGCTTGTGTGT 1578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1579 GAGCACCCAGAATIAGAAGAIATGAIGIGGACCCIITFCCAGCACACGCCTGGAAGGAG 1638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1639 TATGAACTCATGAGAGAGAGATTTGGACCAAATTATGATGTGTGCGATGTATGGCATA 1698
                                                                                                                                                                                                                                                                                1999 TEGENTER CONTROL OF THE PART OF THE PARAGORIZED AND THE PARABORIZED AND A TRANSPORTED AND A TRANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1899 TGCAAAGTGAAGAATATAGACCTTAA -ATTCAAAATCATTGTAACAGCATACAAGGATCT 1757
121 AATTITAGAAATTGTGAATGAGAAAATTTTTGATATGTGTTTTATTGGGGTGGGTGTTT 180
                                                                                                                                     241 TTGFSTTFGSCATGGATTGTGAAIGTGCTTAAITIAAAAGCCTTFGATTTTAGAAGTG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       461 CGATGTGAACATGGAATCATGGAATGCGTTGCATGGCTCTCAGATTCACTTTATTTGAT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601 GCARCCTCAGCTTCCAGACCCAGAAGCCATIGAAATCTACCTCTTTCACTGTTTAT 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           651 AAAAAAGIGTATGGGCTAGGCTATGTGGGGTAAATAGAGTTTGTGAAGGCTTGTGTGT 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         721 GAGGACCCAGAATTAGAACATATCATCTGGACCCTTTTCCAGCACACCCTGCAGAATGAG 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27% **HALLAAA?AALGAAAQACGAAAAGAAGAAGLGATGAGTIGAALCLGGTGGTGGTGG
                                                                                                                                                                                                                                                                                                                                 1758 TCCTCATGCTGTTCAGGAGACATCAAACGTGT-TTTGATCAAAGAAGGAG 1809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5', mRNA sequence.
BO439221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BU4 19221
                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                    Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>-</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \geq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
```

```
Eukaryola, Metazoa; Cherdata; Graniata, Verfebrata; Buteleostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                    National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
                                                                                                                                                              NIH-MGC http://mgc.nci.nih.qov/.
                                                                                                                                                                                                                                                             Email: eqapbs ramail.nih.gov
HQ4 49221.1 GI:21178297
                                                                                                                                          (bases 1 to 1081)
                                                                                                                                                                                                              Unpublished (1999)
                                                                         Home sapiens
                                                human.
                                                                    ORGANISM
                                                                                                                                                                AUTHORS
                                                                                                                                          KEFFERENCE
                                                                                                                                                                                                              THIRMAI.
                     KEYWORDS
                                                                                                                                                                                         HILE
                                                                                                                                                                                                                                    LNEWWic
                                              S.MES.
```

```
Another Fordam: testis: Vector: pGMV-SP-REE: Site 1: Nort: Site_2: Sail; Cloned uniditectionally: origo di primed. Average insert size 2,5 kb. Library enriched for tull length clones and constructed by Life Technologies. Note: this is a NHH_MGF Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2215 GAAGCAGATGGAAGTAAACATGTGGCAGGAGAGTCGAAATTTGAGCAGAAACTGGGAGAA 2274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2635 TGGATAGTAAGAATGGCCCTAGAGTGGGAGTCCTGATAACCCAGGCCTGTCTGACTACTT 2694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2335 AACAAGGAAGAAATGAGGATCTCAGGACCTTGGTGGACTGTGTGTATACTTCTGGATT 2394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2395 CATTGTCTCTCACAGATGTGACTGTATAACTTTCCCAGGTTCTGTGTTTATGCCAGATTTA 2454
              cDNA Library Preparation: Lite Technologies, the CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bloscience Corporation Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GAAGCAGATGGAAGTAAACATCTCCCAGGAGAGTCCAAATTTCAGGAGAAACTGGCAGAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481 IGCCTTCTTTGTAGCAIATAGGTGATGTTTGCTCTTGTTTTATTAATTTATATGTATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2755 TTTTTTAVTTAACAUGAAGAGGTTAGAAAHGTGTGTATGTATGTAAATGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2455 ATATCTTCAGCTCTTTTCTGGATAIAAATGTGCAGAIGGAAATTGTTGGGTGATTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2515 AAGCCACTTGAAATGTTAGTGATTGTTATTTATACAAGATTGAAAATCTTGTGAAATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2575 TGCCATTTAAAAAGTTGTAGCAGATTGTTTTGCTCTTCCAAAGTAAAATTGCTGTGCTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="embryonal carcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 14; Length 1981;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                           found through the L.M.A.G.E. Consortium/JLML at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27.5%; Score 856; DR 14;
99.1%; Pred. No. 9.3er 155;
tive 0; Mismatches 5;
                                                                                                                                    Plate: LLAM13211 row: k column: 01
                                                                                                                                                                                                                   /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                           /clone_lib-"NIH_MGC_92"
                                                                                                                                                           High quality sequence stop: 732.
                                                                                                                                                                                                                                                        /elone-"IMAGE:6015480"
                                                                                                                                                                                                                                   /db_xret:"taxon:9606"
                                                                                                                                                                           Location/Qualifiers
Tissue Procurement: AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 892; Conservative
                                                                                                                                                                                              .1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local
                                                                                                                                                                                                  Source
                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
```

```
PEFEFENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 5
BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KHYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          # II. 31.1
                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                 0,7
                                                                                                                                                                                                                                                                          90
                                                                                                                                                                                                                                                                                                                                                        윤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                           HQ22:27f
AGENYOTRI_7572621 NIH_MGC_92 HOMO SAPIEDS CDNA clone IMAGE:6644522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /Lissue_type="embryonal carcinoma, cell line"
/lab_host="DBIOB (phage-resistant)"
/note="Gorgan: lestis, Verfor: pcMV-SPORT6; Site_1: NotI;
Site_2: Sali, Cloned unidirectionally, oligo-dr primed.
Average itser's in 2 % kt library entiring for full-length clones and constructed by life Technologies
Note: this is a NH_MGC Library."
a 149 c 155 q 264 t.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
Eukaryota, Metasoa, Chordata, Craniata, Vertebrata, Euleleostomi,
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                  1955 SAACTIAGIGALFATTICTICATCAACTTATGTTTTAAATGA-GGAFTAFFGATAGT 3113
2875 TAGAAATTAGAAAAAATTAGTAATTTTAGATTTGGATTTTTATTTTTAGGAATGT 2934
                                                                                2995 AGTATAACCATATGATACTAGTACTACTAGTGAAAGAGTGCATGATGGGAATGTAAAA 3054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by The F.M.A.G.E. Consortium (Link.) DNA Sequencing by Agenceut Bioscience Corporation Cloud alstribution. MGC cloud distribution information can be found through the LiM.A.G.E. Consortium/LLNE at: http://mgac.lscl.gov
                                       20 GATATACHGEGETGTTTTATAAAATTTTGCTTTT-ATTAAATAAAAGCGGAAGCAA 778
                                                                                                                                                                                                         279 AGIATAAGGAIATGATACIATGATACIACTGAAACAGAITTCATACCTCAGAATGIAAAA 838
                                                                                                                                                                                                                                                                        185 AAATGGAAGATGATCTGGTGATTTCATTTCAGTTAATGCTATGTGCTTGACTATTTTA 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           245 TIAAACICTCACCICCCATGTTGCICAAAGAACCAIAIAAAACAGCIGIIAIAAACAITA 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             305 ATGGTTTPATTTTPAAPAPAPAPAGAGAGGTTPAGAAFAGGAGTGCAAGGATTAGAAAAAAAAG 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 AAATGGAAGATGATGTGGTGATTTTGATTTCAGTTAATGCTATGTGTGTCGTTGAGTATTTTA 60
                     DB 14; Length 881;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    101013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 844.8; DB 14;
Pred. No. 1.3c=152;
O: Mismatches 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Plate: ULAM13287 row: e column: 03
High quality sequence stop: 690.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Fh.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zalone Tib "NIH MGC 92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 881)
NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "14xon-9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: cqapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BO220275.1 G1:20101675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27.1%;
99.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                       5', mRNA sequence.
BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lacai Similarity 99.00
oc 971: Coservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  51 4 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ouery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Souther
                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C.R.(JAN1SM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matchee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE CONT
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHIRS
                                                                                                                                                                                                                                                                                                                                                                       NU22475
DAGUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYW-KDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KELEKEN, F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOSERNAL
                                                                                                                                                                                                                                                                                                                                                      KI SULL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSITA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MMENI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KICIN
                                                                                                                                                                                                         £
                                    3
                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    â
                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
```

```
CENCOUPT_6480007 NIH_MOC_92 Home sapiens cond clone IMACH:5575683
57, mRMA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eskarydia, Medadda, Ofordala, Ciunlata, Vertekrata, Enteleostomi:
Mammalia: Butheria: Primates; Catarrhini: Hominidae: Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             965 GATTATCCATTCAAAAITTTAGGAAACTTCTGAATGACAACA-TTTTTCATATGT-CTTT 1022
241 AGGTGAAAAATGTTTATTTCAAAAATTTTATACCTTTTATGAATTCTCTTGGACTTGTAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                721 AACTTIGGAGILIGGERIGEALTAGGSAGTAATGGAATCCATGCTTAAATCAGAAGAAG 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    781 GATTATCCATTCAAAATTTTAGCAAACTTCTGAATGAGCACATTTTTTGATATGTGCTTT 840
                                                                                                                                                                                               425 AGGTGAAAAATGTTTAAAAATTTTATACCTTTTATGAATTCTCTTGGACTTGTAA 484
                                                                                                                                                                                                                                                                                                          485 CATCTAATGGACTTCCAGAGGTTGAAAATCTTTCTAAACGATACGAAGAAATTTATCTTA 944
                                                                                                                                                                                                                                                                                                                                                               301 CALCTAATGGACTTGGAGAGGTTGAAAATGTTTGTAAACGALAGGAAGAAATLIALCTTA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              605 CLALAGAGATITTGAAA7A7A7AGAAGAGGAGAAAAAGTAAGCTTGALGAAGAGGTGA 664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601 GCACAGTGAATGCAAAAGAAAGTATACTGAAAAGAGIGAAGGATATAGGATACATCTTIA 660
                                                                                 365 TAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATATAGATG 424
                                                                                                                                                                                                                                                                                                                                                                                                                   545 AAAATAAAGATCTAGATGCAAGATTATTTTTGGATCATGATAAACTCTTCAGACTGATT 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          665 ALGIAALIPPPPARACACTCCAGTTAGGACTGTTATGAACACTATGCAAGAAFTAATGA 724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              785 GIAGAGIGAAHOTAAAAGAAAGAATATACTGAAAAGAGTGAAGGATATAGGATAGATGTTTA 844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         845 AAGAGAAATTTGGTAAAGGTGGGGACAGGGTTGTGTGGGAAATTGGATGACAGGGATACA 904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    905 ARCTIGGAGIICGCIIGSIAIIACCCGAGAIAAAICGAIGTIAAAIGAGAAGAAGAAGC 964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NIH-MGC http://mgc.ici.nih.gov/. National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     725 IGAITITAAATICAGCAAGIGAIGAACCIICAGAAAATCIGAITICCTATTTAACAACT 784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The 1.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1923 APPOSTOPOTOPOTETEASSETFSTAATSSCCASALATASS 1962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: cqapbs-r@mail.nih.qov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BM475603.1 GI:18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ппшап.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NOTITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
```

```
5;
                                                                                                                                                                                                                                                                             /cloud_lib="Milt-MGC_92"
/tissuc_fype="combryonal carcinoma, cell line"
/tissuc_fype="combryonal carcinoma, cell line"
/lab_lost="DilOB [phage=resis and ]"
/ioth="corquit testis; Vector: pCMV SPORT6; Site_1: NotI:
Site_2: Sall; Cloned unidirectionally; oliqo-dT primed.
Avcrage insert sire 2 % kt library currented for
full-length clones and constructed by Life Technologies
Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          497 GGTGAAAAATGTTTATTTCAAAAATTTTATACCTTTTATGAATTCTTGGACTTGTAAAC 556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          606 TATAGACAGTITI GAAAGAGAGAGAACACCACAAAAGITAACCITIGATGAGGAGGGG
DNA Sequencind by: Agencourt Bioscience Corporation to a consecuence distribution. MGC clone distribution information can be found through the T.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          66. GACA FORGA ACTITA TATA TETES GACACA GAGATIC GATA TOTA CHA AATITO 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    126 TRICATIOGROCIAAAAGELOTIOGACACATITITIATTACCIAAAGGGGAAGTATTACA 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       197 TGCATTGGTGCTAAAAGTTTGTTGGATCACATTTTTATTAGCTAAAGGGGAAGTATTAGA 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                246 TAAACTCTCACCTCCCALGTTGCTCAAAGAACCATATAAAAGAGCTGFFATAGCCATTAA 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            306 FOOTFICACO FOGAACACOCAGOCGAGGICAGAAAGAGGAGIGCACGGA FACAAAAAAAF 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   466 AGAAAATGATAGAAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATATATAGATGA 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.37. AGAAAA IGA I ACAAGAATI PA FII GAAG I TICII GITAAAGAACA I GAAFGI BATAGATGA - 496.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     426 GGTGAAAAA1GTFTATFTGAAAAAFFFFTATACGFFFFTATGAATFFFFGGAFFFFGTAAF 485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 486 ATCLAATGGAGTTCGAGAGGTTGAAAATGTTTCTAAAGGATAGGAAGAATTTTATGTTAA 545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              346 AAATAAAGATCTAGATGCAAGATTATTTTTGGATCATGATAAAACCCTTCAGACTGATTC 605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         677 TATAGACAGTITTGAAAGACAGAGAACACGCAGGAAAAAGTAAGCTTGATGAAGAGGTGAA 736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         666 TGTAATTOGTGGAGAGTGGAGTTAGGAGTGTTATGAAGAGTATGGAAGATTAATGAT 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7 ATGTCAAGAGTGTTGAAGAAGTATGATGTTTGTTTGCAGTCTTCAGCAAATT-GGAAAG 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    186 AATGGAAGATGATCTGGTGATTTCATTTCAGTTAATGCTATGTGTCCTTGACTATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              wery Match 24.28; Score 753.6; DB 13; Length 1001; est Local Similarity 95.08; Pred. No. 4.8e-135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                              Plate: LLAM12426 row: 1 column: 04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                 /organism-"Homo sapiens"
                                                                                                                  High quality sequence start: 17
High quality sequence stop: 734.
                                                                                                                                                                                                                                                              Zelone-"IMAGE:5575683"
                                                                                                                                                                                                                                     /db_xret-"taxon:9606"
                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 800; Conservative
                                                                                                                                                                                           1001. .1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NICHE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>2</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     >·
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
```

```
of three ovaries, from lemales ranging in age from 38 to 49 yo. Library is oligo-dr primed and directionally cloned (brook site is destroyed upon cloning). Average insert size 2.1 kb, insert size range 1-4.6 kb, library is constanted and enriched for full length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 036.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    BMS45881
AGENCOURT_6505183 NIH_MOC_125 Homo sapiens chwa cione iMACE:5588245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note-"Organ: ovary (pool of 3); Vector: pCMV-SFORT6;
Site_1: EcoRV (destroyed); Site_2: Not1; RNA source pool
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2080 TTCCCCACTTCTCAGAAGTTCCAGAAATAAATCAGATGGTATGTAACAGGGACGTGTG 2139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2140 CTCAAAAGAAGTGCTGAAGGAAGCAACCCTCGTAAACCAGTGAAAAACTACGGTTTGAT 2199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA Library Preparation: Lite Technologies, Inc. CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL.) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution. MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              84 TGCACACTGAATCCAAAAGAAACTATACTGAAAAGAGTGAAGGATATAGGATACATCTTT 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NIH.MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240 ITGIAGACITCIGAGAAGITCCAGAAAATAAATCAGATGGIATGTAACAGGGAGGGTGTG 299
737 INGTRAFITICCT CCACACACT CCAGT LAGGACT LA LOBACTAT CCAACAATT AATGAT 796
                                                      726 GATTTTAAATTCAGCAAGTGATCAACCTTCAGAAAATCTGATTT -- CCTATTTTAACAAC 783
                                                                                                        797 GATTTTAAATTCAGCAAGTGATCAACCTTCAAAAAATCCGATTTTCCLATTTTAACAAC 856
                                                                                                                                                                                                             857 TGCACCGTGGAAICCCAAAAGAAAGCTATACCGGAAAAGAAGCGTAAGGAAIATATAGAAT 916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ed Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1122)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DR 14; Length 1122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24.2%; Score 752.4; DR 13;
95.6%; Pred. No. 8.2e-135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             359 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               http://imagé.llnl.gov
Plate: LLAM12359 row: a column: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib="NIH_MGC_125"
/lab_host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism-"Homo sapiens"
/db_xre1-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence start: 48
High quality sequence stop: 773.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone-"IMAGE:5588245"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: cgapbs-r@mail.nih.qov
Tissue Procurement: Invitrogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                216 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BM545881.1 GI:18778365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             185 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 827; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BM54588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human.
                                                                                                                                                                                                                                                                  844 AA 845
                                                                                                                                                                                                                                                                                                                   917 AA 918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Loral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                RESULT 6
BM545881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                         à
                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                    ò
                                                                                                        qq
                                                                                                                                                            ò
```

```
EST 14-AB1-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Poustka,A., Wellenreuther,R., Mewes,H.W., Weil,B. and Wiemann,S.).
EST (Foustka,A., Wellenperther, F., Mewes,H.W., Weil,B. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
2200 ALTGARGGECAGAEGAAGGAGAEGAAGEAGEAAGAEGEGGAGAGAGEGGAATETGAA
                                                                                                                                                                             2340 GTACACTUSTATORATICIPALATACARRICIPACA (CARACTUSTA LA LA CARACTUSTA (CARACTUSTA CARACTUSTA CARAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2440 ITATGGGGACATTTAATATCTTCAGCPCTTTTTGTGGATATAAAATGGGGGATGCAATT 2499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SSO GITTGGGTGATTCCTAAGCCACTTGAAATGTTAGTCATTGTTATTATATACAAGATTGAAA 2559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2560 AFCILGIGIAAAIGCEGGATTTAAAAAATTTGTAGGAGTTGTTTGGTGTGTTTGGAAAGTAA 2619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2620 AATTGELGIGCHTTATGGATAGTAAAAATGGGGGTAGGAGTGGGAGTGCTGATAAGCCAGG 2679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2686 CCTGTGTGACTACTFGGCTGCTTGCTTGCACATAGACATGCTGCCTGCTTGTTTTAT 2739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2740 TAATITATA-TGTATATTTTTTTAATTTAACATGAA-CACCCTTAGAAAATGTGFCCTA 2796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2797 TOTALCTICGAAATGCAATTTGAITGACTGCCCATTCACCAAATTATGCTGAACTCTTG 2856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      959 TOTATOTTOCAAATIGGAATITIGATTIGACTIGGCCATTIGACTAAATTATIGCTIGAACTIGCTIG 1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2857 TGCAAAAAT-GGATATTATAAAAATTAGAAAAATTACTAATTTTACACATTAGATTT 2915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480 AGCATGGATACCTCAAACAAGGAAGAGAAATGAGGATCTCAGGACCTTGGTGGACACTCT 539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         546 GIACACCICIGGATICATITETOTOTOTOTATATATATATATATATOTOTATATOTAT 599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     720 AICITGIGIAAAAIGCIGCCAITIAAAAGIIGIAGCAGAITGITGCICTTCCAAAGIAA 779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   780 ATTICLOTOTITATICATACTAACAAAAATCCCCTAAGAGTCCGAGTCCTGATAACCCAGG 839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               839 IAATITATAATGGATATTTTTTTTAATTTAACATGAANCACCCTTAGAAAATGTGTCCTA 958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DKFZp31388916_rl 313 (symbosym: hlcc2) Homo sapiens cDNA clone
DKFZp31380816 57, mRNA sequence
ALS97811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VNC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    707 PF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2316 TALITHATIGGAATCTGATAIA 2940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1078 TATTITACIATIGAAAACGGAATA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AL597811.1 GT-15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Poustka A.J.
Department Lehrach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpúblished (1999)
Contact: Poustka A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A. T. P. S. S. T. P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J SURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AI 597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSIEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lanns
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ę.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              â
    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17
                                                                                                                                                                                       Ę
                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
```

```
Heidelberg/Germany) within the cDNA sequencing consortium of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /lab_host."DH10B"
/hote "Vector. pTriplEx2, Sitt.1, Sfila; Sitc 2; StilB;
cDNA-collection"
                                                                      Pax: 449-50-84131128
Email: poustkaemping-berlin-dahlem.mpq.de
This is the 7 sequence of the clore insert
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (RMFZ); Email s.Wiemann&dkf2- heidelberg.de:
                                                                                                                                                                                                                                                                                   This cione (DKFZp31300816) is available at the RZPD in Merlin. Presse contact the RZTP. Alssentichentum. Helbnerwey (, 14059-Berlin-Charlottenburg, GREMANNY; Email: clone@rzpd.de. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1491 GAAATCTACCTCTCTTTCACTGTTTTATAAAAAAGGTGTATCGGCTAGCCTATCTCCGGCT 1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1551 AAATACACTTTGTGAACGCCTTGTGTGTGAGCACCCAGAATTAGAACATATCATGTGTGGAG, 1615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1671 AATTATGATGTTCCATGTATGGCATATGCAAAGTGAAGATATAGACGTTAAATTGAA 1730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1731 AATCATTGTAACACATACAAGGATCTTCCTCATGC GLICAGGAGALTCAAACGIGI 1790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1971 HAACAD TATATTE ACCONTAAAAA POATAAAAATTE GASAAASTOTOOGAAACO 2030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1791 TTTGATCAAAGAGGGAGTATGATTCTATTATAGTATTCTATAACTCGGTCTTGATGTG 1850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1911 ACCHCACATHOCHGGAGCCCTFACAAGTHTGCTAGHTCACCCTFACGGATHOCHGGAGG 1970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 AAATAMATTIGTGAAMAMMITTIGTGGGAAGGAAATTAGAAGAIGAIGAGAGA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301 PEPGAAVGAAGAAGAGGAGTATGATTGTATAAGIAREGAAVAACEGGGFCFICAFGCA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541 AACAAAAIGAGIGGAAGAIGAAGAAGIIAGIAIGAGIGAAICAITGGGGACTIC 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2031 AACAAAAAIGACICTAAGAICAAGAAGTIAGIAICAAIIGGIGAAIGAITGGGGAGIIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23.3%; Score 725.4; DB 9; Length 727; 99.9%; Pred, No. 1.3e 129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           indels
                                                                                                                                                                                            sequenced by DKFZ (German Cancer Research Center,
Max-Planck-Institute for Molecular Genetics
Thnestrasse 73, 14195 Herlin, Germany
Tel: 449-30-84131623
                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone-inktypalio0016"
/clone-lib--313 (synonym: hlcc2)"
/dev_stage--adult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46€1 og 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      198 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                            /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        130 q
                                                                                                                                                                                                                                                                  No s1 sequence available.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ó
                                                                                                                                                                                                                                           German Genome Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        161 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                     727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Sim
Matches 726;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                        Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               È,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
```

.. S

```
FQZZZZZZ?
AJENYJOTKI,7565045 NIB_MGC_92 Homo sapiens cDNA clone IMAGE:6041563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       //issue_irpe "embaronal catcinoma, cell line"
/lab_host="DHIOB (phage-resistant)"
/note:"organ: restix: Vector: pGMV-SPORT6: Site_1: Not1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Another Torgan: testis; Vector: punvisiones, conservations Site_2; Sall; Cloned unidirectionally; oliqued of primed. Saverage insert salls (Source 1.5 kb. Library enriched for fall length octones and constructed by Lile Technologies. Note: this is a NHEMSC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryola; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalla; Eutherla; Primates; Catarrhini; Hominidae; Homo.
                                                                      2151 TGCTGAAGGAAGCAACCTCCTAAAGGACTGAAAAAAQTAGGCTTTGATGATATTGAAGGTC 2210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94 CCCARTAGITGGATATCIACTGAAATAAATTCTGCATTGGTGGTAAAAGTTTCTTGGATC 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 154 ACATTITALLASTIAAAGSQQAAAGTATLAGAAALGGAAGATGTGTGTGATTTGATTT 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        214 CAGITAATGCTATGTGTGTTGAGTATTTTATTAAACTGTGAGGTGGTGGTGAAA 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clone distribution: MGC clone distribution intormation can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIH MEC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels 1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   44 CHATHGETTOCACHOFFICAGCAAATTGGAAAGGACATGEGAACETATATETTGACACAA 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GTALLGITTOMACTOTTOMACAAALIGGAAAGGACATGTGAACTTATATALITGACACAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA Library Preparation: Lite Technologies, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 720.6; DB-14; Length 880;
Pred. No. 1.1e-128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 found through the L.M.A.G.E. Consortium/LLINL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plate: LLAM13279 row: i column: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0) Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
Email: eqapbs t@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        High quality sequence stop: 606.
Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /~lone lib-"NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zelone-"IMAGE: 6041563"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _ரசுர்த்தி பிருத்தார்.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tissue Procurement: AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                    MQ242427.1 01:40403627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23.1%;
98.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 880)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                    mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Allo stret
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
                                                                                                                                                                    2211 ACATGAA 2217
                                                                                                                                                                                                                  721 AGATGAA 727
                                                                                                                                                                                                                                                                                                                                                                                                                  HU22227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 737;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ourry Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           O. Huest
                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OKGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HASE CHUNT
                                                                                                                                                                                                                                                                                                                                                                                                               ACCESS FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                  My22227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                           RESILL 8
                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ... MME.N.L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Z ...
                                                                                                                                                                                                                                                                                                                                           SH. 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
```

```
HGG10661 823 bp mRNA linear EST-18 APR-2001
025611848E1 N1H_MGC_50 Homo sapiens cond-clone (MAGE:4737634 5-),
mRNA sequence.
BGG10661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
                                                                                                                                                                                                                                                                                                   454 ATACCTTTTATGAATTCTCTTGGACTTGTAACATCTAATGGACTTCCAGAGGTTGAAAAT 514
                                                                                                                                                                                                                                                                                                                                                                               Mammalia: Entheria: Primates: Catarrhini: Hominidae: Homo.
1. (bases 1 to 824)
MIH MGC hallp.//mer.nei.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA Sequencing by: Incyte Genemics, inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.llnl.gov
                                                                                                                                                 394 CTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATTTT 453
                                                                                                                                                                                                                                    421 ATACCITITATGAAITCICITGGACIIGIAACATCIAATGGACIICCAGAGIICAAAAAI 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      574 TIGGATGATGATAAAACICTIGAGACIGAIIGIAIAGACAGII11GAAACACACAGAGA 633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541 THGGATCALGALAAAACHCHHCAGACHGALLCHALAGACAGFHTHGAAACACAGAGACA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       694 ACTORTARGAACACTARCCAACAATTAARGARCTTTBAARFIRGACAAGLAAFGAA GC 752
181 CAGTFAATGCTATGTGTCTTGACTATTTAAACTCTCACCTCCATGTTGTTGAAA 240
                                          334 CAGAACAGGAGTGCACGGAFAGCAAAAGAAGTAGAAAATGATACAAGAATTALTGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA Library Preparation: CLONETECH Laboratories, Inc. CDNA Library Arrayed by: The 1.M.A.G.E. Consortium (LLNL)
                                                                                  241 GAACCATATAAAACAGCTGTTATACCCA11AA1GG11CACCTGGAACACCCAGGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               =
=
=
=
=
=
                                                                /tissue type="adenocareinoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plate: LLCM1605 row: o column: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Emall: eqapbs-r-mail.nih.gov
Tissue Procurement: DCID/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"Homo sapiens"
/db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /elone lib="NIH_MGC_60"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence stop: 709.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xrel="taxon:9606"
/clone="IMAGE:4737634"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               753 TICAGAAAAICIGATITCCITAITITAA 779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        721 TTCAAAAATCTGATTTTCCTATTTA 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BG610061.1 GI.14662042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BG610661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOUCH
                                            ò
                                                                                  qq
                                                                                                                               ŝ
                                                                                                                                                                   qq
                                                                                                                                                                                                                ć
                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                   ć
                                                                                                                                                                                                                                                                                                                                         급
                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  СP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
```

```
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
    A1563757
                                                                                                                                                                                                                                                                        numan.
                                                                                                                                                                                                                                                 EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                       DEFINITION
                                                                                                             AL563757/c
                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                        RESULT 10
                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                    וייייו
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                먑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            쉳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ءِ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                      5
                  /note "Objain prostate; Vector: pDNR-LIB (Cloudeach);
Site_1: Sill (agedgectoggec); Site_2: Sill (agecattatggec);
Double-stranded cDNA was prepared from cell line RNA.
5 and 3 adaptors were used in clouding as follows: 5
                                                                                                      adaptor sequence: 5'-CACOOCCATTATCOCC-3' and 3' adaptor sequence: 5'-ATTCTACACOCCATTATCOCC-3' and 3' adaptor sequence: 5'-ATTCTACACOCCATTATCOCC-3' and 3' ACD to the a A, C, to G and N A, C, G, or I). Average insert size 1.5 k frange 0-4.0 kb; 14/15 colonies contained inserts by PCR. This library was enriched for tull-length clones and was constructed by Clontech
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2661 OGASTOPPGAPAACOOASGOFFFFFFFFFANTFFFGOOPPFFFFGSAAFFFGOOFFFFFGSAFAGGASATAGGIGA 2720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2958 AAAAITIIGGIIIIAAFFAAAIAAAAGGGGAAGGAAAGFATAAAGGATATGATAGA 3017
                                                                                                                                                                                                                                                                                                                                                                                                                                                2241 AGGAGACTOTAAATTTGASOAGAAATGSSOASAAATGACTTGTAGTGGAACACGAATGSA 2300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2361 GGACCTIGGITGGAAACTGTGTAAAACTFFTGGATTGTGTGTGTGAAAAAAAGAGTGTA 2420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2421 TAACTITCCCAGGTFOTGTFTAFGGGGGAGATFTAATAFGTGCAGCCCTTTTGTGGATAT 2480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2781 TAGAAAATGTGTGTTAFTAFTATGTGGAAATGGAATFTGAFFGAGTGGGAATFTAAGAAAAA 2840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2998 ATTITACACALTACATITIALITIACTALTEGAAATCICATACESESSESSACTESTIATAT 2957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2841 ITATOOTGAACTOTTONGOAAAATGGATACTATTAGAAATT---AGAAAAAAAAGTAGTA 2897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481 IGIIIGCICITGTATTTATTAATTTATATGTATATTTTTTTTAATTTTAACATGAAGACCCT 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        718 IAAAATIIGCITIAACIAACAIACAAGTEGAAGTAIA-A**AIAFGAA*TAFGA 776
                                                                                                                                                                                                                                               Laboratories (Palo Alto, CA). Note: this is a NIH_MGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301 FATTTALACAAGAFTGAAAATCTTGTGTAAATCCTGCCATTTAAAAAGTTGTAGCAGATT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 TAACTITCOCASSILOTGITLAGSSOVACATITAATATOTIOVASITGITITGISSATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2481 AAAATGTGGAGATGCAATHGTTTGGGTGATTGCTAAGGGACTTGAAATGTTAGTGATHGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2721 TGTTTGGTGTTTTTTTTTATTATTATGTATATTTTTTTAATTTAATTGAACAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                         Query Match 12 EA: Score 696.6; DB 12; Length 823;
Hest Local Similarity 94.8%; prcd. No. 1.26-124,
Matches 779: Conservative 0; Mismatches 34; indels 9,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /lab_host-"DH1OB (T1 phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           271 t
                                                                                                                                                                                                                                                                                         142 g
                                                                                                                                                                                                                                                                    Library."
148 c
                                                                                                                                                                                                                                                                                         C3
C3
C4
                                                                                                                                                                                                                                                                                         HASE COUNT
                                                                                                                                                                                                                                                                                                                RIGIN
```

S 5 5 Ś

ŝ <u>a</u> ŝ <u>a</u>

ŝ 2 ŝ 9

5

q

 \dot{z}

```
by Life Technologies. Contact: Feng Liang Life Technologies, a division of Invitrogen 9800 Medical Center Drive Rockville, Maryland 20850, USA Fax. (1) 301 610 8371 Email: fliang@diffetcech.com.URL: http://fulllegth.invitrogen.com" 148 c 117 g 255 t 26 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="Organ brain; Vector: pCMVSPOPT 6; 1st strand cDNA was primed with a NotI-cliqo(dT) primer. Five prime end enriched, double-stranded cDNA was digested with Not I and cloned into the Not I and Eco RV sites of the pCMVSPORT 6 vector. Library was normalized, Library was constructed by Life Technologies. Contact: Feng Liang Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ..
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryola: Metazoa; Chordata; Craniata; Vertebrata, Eutheleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                 ALS63757 LIL_NELÖÜL_NBC4 Homo saptens cuna clone CSUDD07YAUS 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       552 ACGATACGAAGAAATTTTTCTTAAAATAAAGATCTAGATGCAAGATTATTTTGGWTCA 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    582 TGATAAAAPTGTTPAGAGTGATTGTATAGAPAGTTTTGAAAPAGAGAGAAGAGGAGGAAA 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         282 TAAAAAWWYTSTTATAWWATFAATESSTEWWYTWWWYASSWAWWAWWAAAAWA 941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            792 TAAAACAGTKTIAIAPGGAITAATGGITDAGGTOGAGAGGGGAGGGAAAGAGAG 733

    342 GAGFGGAGGAFAGGAAAGAAGAAATGATGATAGAAGAATTATTGAAGTTGTGTGA 401

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  732 GAGTGCACGGWINTAGCAACACAAATTGATTGATACAAGAATTATATTGAAGTTCTCTGTAA 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 402 AGANATGAATGTAATATAGATGAGGTGAAAATGTTTATTTCAAAAATTTTATATACCTTT 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   452 FATGAATTOTOTOTOTAGATTOTAACATOTAALGGAGITOCAGAGGIIGAAAAICITICIAA 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               612 TATGAATTOTOTOTOSAOTTOTWATGOAOTTOTAGAGGTIGAAATICITICTAA 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     522 ACGATACGAAGAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTATTTTTGGATGA 581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP 191 91005 EVPY cedex - France
Email: seqref@genoscope_rns_fr, Web - www.genoscope.cns.fr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 792;
                                                                                                                                                                                                        1 incar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Full-length cDNA libraries and normalization Unpublished (2001)
                               777 (1ACTATEGAA - - CAGATICATACCECAGAATGEAAAGAACCE 816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and Polayes, D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type="neuroblastoma_cells"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22 4%, SOUTH FORLD, DB 9, 93.6%; Pred. No. 2.3e 124; tive 23, Mismatches 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genoscope - Centre National de Sequencage
mPNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="LTI_NFL001_NBC4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"Homo sapiens"
/db_xref="taxon.9666"
                                                                                                                                                                                                        742 hp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone-"csoppooryA05"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 792)
Li,W.B., Gruber,C., Jessee,J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                   ALS63757.1 GI:12913464
                                                                                                                                                                                                                                                                prime, mRNA sequence.
AL563757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Genoscope
```

<u>:</u>

<u>:</u> 5 ã 5 £

Š

```
Shii (ggregortegger); Sire,2: Shii (ggreattatgger); 5 and 4 adaptors were used in cloning as follows: 5' adaptor sequence: 5' CAGGGCATIATGGGC 1' and 1' adaptor sequence: 5'-ATTTATAGGGGGGGGGGGGGGGGGGGGTATGGT(40)BN:3' (Where B - A, C, or G, or T). Average insert size 1.9 C, or G and N - A, C, G, or T). Average insert size 1.9 by P(R, this library was curicked for full-leggth clones and was constructed by Clontech Laboratories (Palo Alto,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BES70456 FST 10-APR-2001
602591412F1 NIH MGY_77 HOMO Sapiens CDNA clone IMAGE:4717874 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryola; Metazoa; Chordata; Craniata; Verrebrata; Eureleostomi;
Mammalia; Eurheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note-"organ: lung; Vector: pDNR-LIB (Clontech); Site_1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution: MGC clone distribution information can be
                                                            FEB TITESTERMENT OF THE FEB TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   252 GAAGGATWIKGGATACWIYTITAAAGAGAAAITTGCTAAAGCTGTGGGGACAGGGTTGTGT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     882 PNAAAT BIGATCACACGCATACAAGTTGG - - AGTTGGCTTGTATTACPGGTAATGGAA 939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        940 TCCATGCTTAAATCAGAAGAAGAACGATTATCCATTCAAAATTTTAGCAAACTTCTGAAT 999
64.2. AAGTAACTT FOA FOAASAGO FOAATGTAAT TOST COASACACTCOAGTT AGGACTCTTAT 170.1
                                                                                                                                                                                                                        702 DAACATATCAACATTAADATTAATTTTTTTAAGTGAGAGTGATGAACTTGAGAAA 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                       762 TCTGATTTGGTATTTTAAGAAGTGGAGTGAATGGAAAAGAAAGTATAGTGAAAAGGAGT 821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          132 FOR INSTITIBILICAGARGAGGACGATTATICAAAATTTTHGGAGTTGTAAT 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      822 GAAGGATALAGGATAGATGTTTAAAGAGAAATTTGGTAAAGGTGTGGGGACAGGGTTGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      con Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: eqapbs:14mail.nih.gov
| Dissue Procurement: CLONIECH Laboratories, Inc.
| CONA Library Preparation: CLONIECH Laboratories, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     found through the L.M.A.G.E. Consortium/LLAN. at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone_lib-"NIH_MGC_77"
/lab_host-"DH10B (Tl_phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Plate: LLCM1568 row: h column: 03
High quality sequence stop: 726.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 767)
NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone-"1MAGE:4717874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref "taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BG570456.1 GE:13578109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 http://imago lini gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA sequence.
BG570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rome Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOULCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NOILINIGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DK: VANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESIDE 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEFEKEN('E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BG5.70456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SHURCE
```

```
mRNA linear EST 05 FEB 2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BM466194 GR 973 NIH_MGC_92 Bome sapiens chNA clone IMAGE:5576939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
                                                                                                                                                                                                                                                                  2381 TACACCICIGGALICALICICICICACAGACIGACICIATAACHTOOCAGADLICICT 2440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8860 AAAAATGGATATTATTAGAAATTAGAAAAAATTACTAATTTACAAATTTAAAATTAAATTAAATTAAAAATTAATT 2919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9920 Tractatrogaatcrcatatactoroffon forthiataaaaliilottiiaariaaat 2979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2980 AAAAGCTGGAAGCAAAGTATAACCATATGATACTATCATACTACTGAAACAAGATTTCATA 3039
                                                                                                                                                                             2321 GCATGGATACCTCAAACAAGGAAGAAATGAGGATCTCAGGACCTTGGTGGACACTGTG 2380
                                                                                                                                                                                                                                                                                                                                                      244i FAIGGCONMETAALAICEEGAGTCEETIGEGALATAAAALGEGAAGAGAGAGAAAGAGGAATG 2500
                                                                                                                                                                                                                                                                                                                                                                                                                                           2501 TITGGGTGATTCCIAAGCCACTIGAAAIG1IAGICALIG1TATTATATACAAGTTGAAAA 2560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2561 TCTTGTGTAAATGCTGCCATTTAAAAAG11G1AGCAGA11GTTTCTG1G1GCAAAG1AAA 2620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2621 ATTGCTGTGCTTTATGGATAGTAAGAATCGCCCTAGACTCGGGAGTCCTGATAACCCAAGC 2680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2741 AATTTATATGTATATTTTTAATTTAACATGAACACCONTAGAAAATGIGIOOFATOTA 2800
                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361 CTGTCTGACTACTTTGCCTTCTTTTGTAGGATATAGGTGATGTTTGCTCTTTTATT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421 AATTTATATGTATATTTTTAATTTAACATGAACACCTTAGAAAATGTGTCTATGTA 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601 TTACTATGGGAAFCTGATATACTGTGTTGTTTATAAAA 11TGCTTTAATTAAAT 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 TACAWICLGGALICALIGICICICAWAGAIGIGA. LGIAIAAWIII CCAGGITCTGIT 120
                                                                                                                                                                                                                         1 GCATGGATACTICAAACAAGGAAGAAATGAAGATCTCAGGACTTGG16GACACTGTG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2681 CTGTCTGACTTGCCTTCTTTTGTAGCATATAGGTGATGTTTGCTTGTTTTTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2801 TOTTOCAAATGCAAIIIGAIIGACI -GO CAIICACGAAAAIIAICTIGAACICTIC LO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Manumalia, Entheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4
                                                                                           Length 767;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8040 CCTCAGAATGT-AAAAGAACTTACTGATTATTTTCTTCATCCAACTTAT 4087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            719 CCTCAGAAIGIGIAAGGAACITACGGAIAITICITTCATCCAAATTAT 767
                                                                                                                                      indels
CA). Note: this is a NIH_MGC Library."
a 125 c 130 a 279 t
                                                                                             DB 123
                                                                                                                                      ...
                                                                                           22,2%; Score 692,2; DB 12, 97,1%; Pred. No. 3,2c 123;
                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BM466194.1 G1:18515246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5', mkNA sequence.
BM466194
                                                                                                                                      Matches 747; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                  Local Similarity
                           233 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human.
                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                               HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BM466194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                    Hest
                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COCHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             λο
-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                      ó
                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G
```

```
ç
                                                                                                                                                                                                                  皇
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ζč
                                     Ś
                                                                       2
                                                                                                           ò
                                                                                                                                           임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ت
                                                                                                                                                                                                                                                                                                                                                                         2476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2.47 TOTOTACACOPOTOTOTATENATECTOTACAGATGAGATGTATAAATTOOCAGGING 2435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2797 TOTATOTTONAAATGNAATTTGATTGATTGAOTGOOGATOAAAATTADOOTGAAOTGTTG 2886
                                                                                    Email: cgapbs-remail.nih.gov
Tissue Procurement: ATCC
CDNA Library Preparation: Life Technologies, Inc.
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MSC circle distribution information can be
found through the T M A G E Consortium/LDNL at:
Plate: LLAM12329 row: j column: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2437 TGTTTATGGGGAAFTTAAAFAPTFGAGCFGTTTTGFGGAFAFAAAATGTGGAAFHGGA 2496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2497 ATTGTTTGCCTCATTCCTAACCCACTTGAAATGTTAGTCATTGTTATTATACAAGATTG 2556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 FGLGFACACCPCTGGATTCAFFGTCTCACACAGATGTGACTGTATAACTTTCCCAGGTTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 TGTTTATGGCCACATTTAATATCTTCAGCTCTTTTTGTGGATATAAAATGTGCAGATGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 AAAATCTTGPGPAAAPCCBGCATTTAAAAAGTBGTAGABATTGFFGCPTFFFGFAAAG 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421 AGGOCTGTCTGACTACTTTGCCTTCTTTGTANCATATAGGTGATGTTTGTTTTT 480
1 (bases 1 to 372)
NIB MGC http://mqc.nat.nih.gov/.
National Institutes of Health, Manmalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CATCACAAACTGGGAGAAATGAATTTAGTGGAAGAGGAATGGAAAAAGGASAAAATGAAT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6, Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PELM TABANTTSCTGTGTGTTTATGGATANAAATGGGCCTAGAGTGGGAGTGCTGAGAATGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PR 13, Length 972,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. 3,8e 123, 0; Mismatches 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Obery Maint
Hest Local Similarity 96.7%; Fred. No. 3.8
Matches 72%; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                           /organism-"Homo sapiens"
                                                                       Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                           /clone_lib="NiH_MGC_92"
                                                                                                                                                                                                                                                    High quality sequence stop: 621. I.ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                         /clone-"IMAGE:5576939"
                                                                                                                                                                                                                                                                                                                        AB Xret-"Laxon 9606"
                                                    Unpublished (1999)
                                                                                                                                                                                                                                                                                          . 972
                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RASE DOUNT
                                   TITLE
JOURNAL
 REFERENCE
                    AUTHORS
                                                                                                                                                                                                                                                                       FEATURES
                                                                       I N I WW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>Q</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
```

```
ESI 05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ó
                                                                                                                                                                                                                                                                                                                                                                                                                                 AGENCY (IPT_648274 & NIH_MGL_72 Home sapiens con close IMAGE:5528814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /tissue_type="melanotic melanoma"
/tab_most="Dhil08 (phage-resistant)"
/tab_most="Dhil08 (phage-resistant)"
/note="Organ: skin; Vector: pCMV-SPORT6; Site_1: Notf;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 2 kb. Library constructed by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota, Metazoa, Chordata; Graniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2917 ATTIACIAIIGGAAICIGAIAIACIGIG-----IGCIIGITIIAIAAAAITIIGCIIII 2971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1218 ACGARGIGAN/APGAATCATGSAATGCGIIGGAIGGCICHGAAATGCACTITAITIGA 1277
                                               2857 IGCAAAAATGGATATTATTAGAAATTAGAAAAATTACTAATTTTACACATTAGATTTT 2916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1278 FOTTATTAAACAATOAAASSOOGAAAAASSASSAAGOATOAOGFEGAAFOTGTTGTOO 1237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by The I M A G E Consortium (LLNL) DNA Sequencing by Agencyurt Bioscience Orporation Clone distribution: MGC clone distribution information can be found through the I M A G E. Consortium/LLNL at-
                                                                                            601 TGCAAAAATGGATATTAAAAATTAGAAAAAATTTACTAATTTTACACATTAGACTTTT 660
                                                                                                                                                                                           661 ATTTTACTATTGGAATCTGATATACTGTGGGGCTTGGTTTTATAACAATTTFGCCTTTTA 720
541 ICIALTITICAAAIGAAAITIGATIGACTGOCCATICACCAAAAITATCCTGAAACTCTTC 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIH MCC http.//mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MCC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          U; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 835)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21.8%; Score 678, DB 13, Length 835;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 others
                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 1.7e-120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ó;
                                                                                                                                                                                                                                                                                                                                                                                                               mPNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 233 t
                                                                                                                                                                                                                                          2972 AATTAAATAAAAGCT-GGAAGCAAAGTATAACC 3003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 http://image.llnl.gov
Plate: LLAM12206 row: e column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Prec. ...
                                                                                                                                                                                                                                                                                     721 ATTAAGATAAAAGTTGGGAAAGTATAAGC 753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email. cgapbs-r@mail.nih.gov
Tissue Procutement: ATCC/DCTD/UTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact, Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_lib~"NIH_MGC_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop: 647.
                                                                                                                                                                                                                                                                                                                                                                                                          835 hp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone="IMAGE:5528814"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            137 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PM453724.1 CT:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Technologies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 210 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 678; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                       5', mRNA sequence.
BM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 254 a
                                                                                                                                                                                                                                                                                                                                                                                                        BM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                             RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                    BM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . : MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                        SHJUCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
```

```
EST 11-001-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Enkaryola; Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rissue_fype="adencearcinoma, cell line"
/lab host-"OH10B (phaqe-resistant)"
/note "ordan: liver; Vector: pCMV SPORT6; Site_1: Not1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        683342330Fl NIH MOC 90 Homo sapiens con clone IMAGE:5402622 57,
1398 ATCTCCAAAGAAAAAGGTTCAACTACGCGTGTAAATTCTACTGCAAAATGCAGAGAGA 1457
                                                                                        1458 AGCAACTICAGCIIICCAGACCAIGGAAAICIACCICICIIICACIGTITTA 1517
                                                                                                                                                                                                                                                                                1978 IGAGGACAGAATTAGAACATATCATCTGGACGTTTTGCAGGAGACCCTGGAGATGA 1637
                                                                                                                                                                                                                                                                                                                                                                         1698 ATOCAAAGTGAAGAATATAGACCTTAAATTCAAAATCATTGTAACAAGAATGT 1757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1758 TOTTOATGCTGAGGGAGAGATCAAACGTGTTTGATGAAGAAGAGGGGTATGATTC 1817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1818 TALLALAGIALICTALAAGICGTCTTCATGCAGAGCAAAAAAAAATATTTTGCAGTA 1877
                                                                                                                                                                                                         474 IGAGNACONAGAALIAGAANALALGAIGIGGACCOLLIICGAGCACACCIGGAGAATGA 432
                                                                                                                                                                                                                                                                                                                                                                                               493 ALIGNAAGIGAAGAALALAGAGGITGAAALGATTGTAAGAGGALAGAAGGATGT 552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55.3 TOPTPATOPIGITCAQGAGAPALICAAACGTGTTTTGATCAAAGAAGAGGAGTATGATTC 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        613 TATIATAGIATEGIALAN TEGGIETEGAGEGAGAGAGAAAAAAAAATATITIGEAGIA 572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       chwa Library Arrayed by: The L.M.A.G.E. Consortium (LLML)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
                                                                                                                                         25.4 AGCAACCTCAGGCLICCAGACGCAGAAGCALIGAAAIGIAGGTGTTTCAGTGTTTA 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NIH MGZ http://mgc.nci.nih.goz/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                      1518 TAAAAAAGTGTATOGOCTAGCCTATCTOGOCTAAATACACTTTGTGAAGGCCTTCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chNA Library Preparation: Lite Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tound through the L.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Plate: U.AM12026 row: k column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Robert Strausberg, Ph.D.
Email: caapbs-romail.nih.gov
Lissue Procurement: AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zorqunism-"Homo Sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zolone lib-"NIH_MGC_90"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      High quality sequence stop: 668.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    672 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            d "taxon:9606"
"IMAGE:5402622"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BIB68359.1 GI:16042032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1878 INTERPREDICACION 1895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 673 TOTTLOCATCAGGCCCCT 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 672)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db xrel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6.72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mkNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HIBSH 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       итиен 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Language 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     d. Juos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CEFINITON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CREANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ALLEGES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LIKNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            653 R3R1H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A. MILLEY
                                            =
                                                                                                                                                                                     5
                                                                                                                                                                                                                               Ê
                                                                                                                                                                                                                                                                                                                        -2
                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ث
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
```

```
AK011246 1464 bp mkNA linear HIC 19-JAN 2002
Mus musculus 10 days embryo whole body cDNA, RIKEN tull length
enriched library, clone:2600017M22:retinoblastoma 1, tull insert
Site_2: Sall; Cloned unidirectionally; oliqo dr primed. Average insert size 1.7 kb. Library enriched for full-length clones and constructed by Life Lechnologies. Note: this is a NHEMGClibrary."
                                                                                                                                                                                                             1979 ATATITCACCCCTGAAGAGICCAIAIAAAA1110AGAAAGGIC1GCCAACACCAACAAAAAAA 2038
                                                                                                                                                                                                                                                                                   2039 TGACTCCAAGATCAAGAATCTTAGTATCAATTGGTGAATPATTPGGGAPTTCTGAGAATT 2098
                                                                                                                                                                                                                                                                                                                                                            2578 CATTTAAAAAAGTTGTAGCAGATTGTTTTGCTCTTCCAAAGTAAAATTGCTGTGTTATGG 2637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23.59 AGGAAGAAATGAGGATCTCAGGACCTTGGTGGACACGTGTGTACACTCTGGATTCATT 2.598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2399 GICTCTCACAGAIGTGACTGTATAACTTTGCCAGGTTCTGTTTATGCCACATTTAATAT 2458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2519 CACTIGAAAIGITAGICAIIGITATIIAIACAAAGAIIGAA-AAICIIGIGIAAAAICCIIGC 2577
                                                                                                                                                                                                                                                                                                                          61 TGACTCCAAGATCAAGATCTTAGTATCAATTGGTGAATCATTCGGGACTTCTGAGAAGT 120
                                                                                                                                                                                                                                                                                                                                                                                                121 TCCAGAAAATAAAATCAGAFGGTAFGTAACAGCGACCGTGTGTFCAAAAGAATTGCTGAAG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421 GTCTCTCACAGAIGTGACTGTATAACTTTCCCAGGTTCTTTATGGCCACATTTAATAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           l; daps
                                                                                                                                                                                                                                 2159 GAAGCAACCCTCCTAAACCACTGAAAAAATTACGCTTEGATAHGAAGGAAGAAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                          2219 CAGATGGAAGTAAACATGTCCCAGGAGAGTGCAAATTTCAGGAGAAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2459 CITCAGCICITITAGGGALAIAAAATGIGGAGAGAAATTGITTGGGTGATTGCTAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMM to MENA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (strain:057H;764) le days embry, comA to me clone_lib:RIKEN full length entiched mouse conA library
                                                                                                                                                                                                                                                                                                                                                                                    21.2%; Score 660; DB 14; Length 672;
99.9%; Pred. No. 5.1e 117;
                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   :
=
                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence.
AKO11246
AKO11246.1 GI:12847243
HTC: CAP trapper.
                                                                                                                                                                         Matches 671; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             clone:2600017M22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2638 ATAGTAAGAATG 2649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661 ATAGTAAGAATG 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus
                                                                                                                                                       Local Similarity
                                                                             228 a
                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AK011246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COCUS
                                                                                                                                                                                                                                                                                       ô
                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                        ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

3

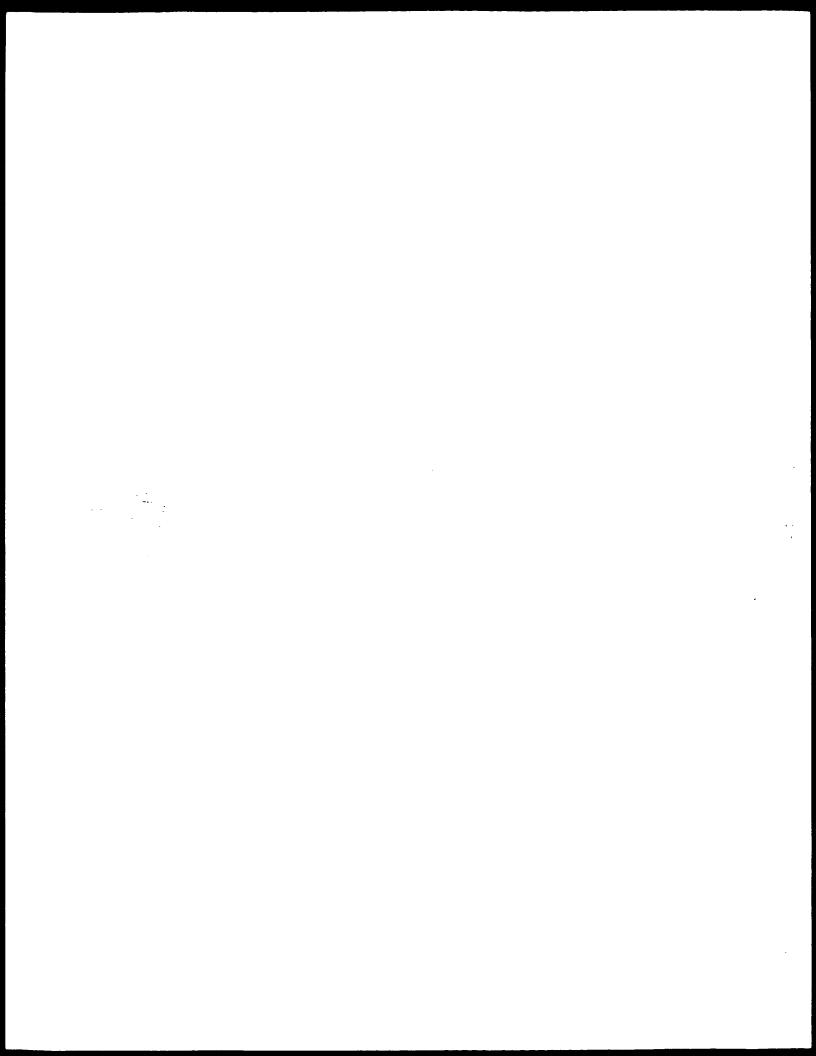
TITLE

```
Genomic Sciences Center and Genome Science Laboratory in RIKIN.

Division of Experimental Animal Research in Riken contributed to prepare mouse Lissuages. First strand cDNA was primed with a primer [5, GAGANANARAATATOCANANATTITITITITITITITITY N. 9], cDNA was prized by using trehalose thermo activated several transfer plasse and subsequently enriched for full-length by capetrapper. Second strand cDNA was prepared with the primer addition of sequence [5] and subsequence [5] with the primer addition of sequence [5] with Nhol and SELL Cloning sites, 5, end: Nhol: 4, end: SELL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /close-"gapoul7M22"
/close_lib="RiKEN full-length enriched mouse cDNA library"
/dev_atge="10 days embryo"
1. .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEDEMPETETELOKSTETSVYRFFDLEKETDTSTRVDNAMSKELKRYNVECALYSKLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ETCELLITLIQPSSALSTEINSMLVLKISWITFLLAKGEVLQMEDDLVISTQLMLCVVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VETERSTRALTERIVETAALSTINGSERTEFFORMESAELAKULLALTALJUNGLAKLELHE
CHIDEVKNVYEKNETPETNSLAIVSSINGLPEVESLSKRYEEVYLKNKOLLAKLELHID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KILÇIDELDSFETERIFRKNIFDEEANVVIFHIFVRIVMHI ÇQLMVILNSASGUPSE
NLISYFNINGIVID"
                                                                                                                                                                                                                                                                                                      Research Group in Riken
                                                                                                                                    Flease visit our web site (http://genome.gov.rihen.go.)p/) for
further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         127 GCAFIGSFGCTAAAAASTIFGTISGAFCACATITITAIIASCTAAAGGGGAASTAITACAA 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     754 ATGGAAGATGACTTGGIAATCTCATTTCAGCTAATGTTGTGTGTGTGTAGTTGACTATTTTATT 813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                574 ATGICAAGACTATIGAAGAAGIAIAATGIGITATGIGCACICIACGAGAAATIAGAAGGG 633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           694 AIGIIGGIGGIAAAAAIIGIIGIIGGAGAGIIIIIIIAGIAAGGIAAAGGAAAGIAIIAGA 283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         247 AAACICEGAGGGGGGTGTTGCTCAAAGAACGATATAAAACAGCTGTTATACGCATTAAT 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7 AIGTCAAGACTGTTGAAGAAGTATGATGTATTGTTTCCACTGTTCAGCAAATTGGAAAGG 66
         Kanayawa 230 0045, Japan (H. mail.yenome-res<sup>2</sup>gse.riken.go.jp.
URLihtt<u>by</u>//genome_gse.riken.go.jp/. Tel:81-45-503-9222,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        187 APGGAAGATGATGPGGTGATTTCATFTCAGTTAATGCTATGTGTCCTTGAGTATTFTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1354;
                                                                                                                                                                                                                                                CDNA library was prepared and sequenced in Mouse Genome
Encyclopedia Project of Genome PMp gration Research Grou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="data source:MCD, source key:MC1:97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scare 650.2, DB 11,
Pred. No. 3.8e-115;
0; Mismatches 88; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /strain="c57BL/6J"
/db_xref="FANTOM_DB:2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   346 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref-"MGD:MGI:1905260"
/db_xref-"taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xret+"MGD:MGI:97874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /protein_id="BAH27493.1"
/db_xref="G1:12847244"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         307 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         evidence: ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /qene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     151. .>1364
/qene-"Rb1"
                                                                                                      Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   306 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Host: SOLR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 703;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sonrce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     윤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ĉ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ĝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Adama, J., Shinagawa, A., Shibata, K., Yoshino, M., Itoh, M., Ishii, Y., Arakawa T., Hara A., Purnishi, Y., Kroneo, H., Adachi, J., Pukuda, S., Alzakawa T., Hara A., Purnishi, K., Kiyosawa, H., Kondo, S., Yamanaka, I., Salio, T., Okazaki, Y., Okazi, Y., Oka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Adachile, Alawar K. Akahira, S., Akimura, T., Aono, H., Arai, A., Atakawa, T., Baldarelli, K., Hono, H., Hrownstein, M., Bult, C., Carninelle, P., Fukuda, S., Fukunishi, Y., Furno, M., Hanaqaki, T., Hara, A., Hayaksu, N., Hill, D., Hramoto, K., Hiraoka, T., Hori, F., Hume, D., Imotani, K., Ishii, Y., Troh, M., Tawa, M., Kaya, S., Kojima, Y., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Myazaki, A., Nishi, K., Nomira, K., Numazaki, F., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Ouackenbush, J., Salto, H., Sa
                                                                                                                                                                                                                                                                                                                                                                                                                                Carminel, P., Shibata, Y., Hayatsu, N., Suqahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramalsu, M. and Hayashizaki, Y. Normalization and subtraction of captrapper-selected rivas to propose fell-length cub libraries for rapid discovery of new yenes censure Res. 10 (10), 1617–1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Shituata.K., itoh,M., Aizawa.K., Nagaoka,S., Sasaki,N., Carninci,P., Konno.H., Akiyama.J., Nishi,K., Kitsunai,T., Tashiro.H., Itoh,M., Sumi,N., Ishii,Y., Nakamura,S., Hazama,M., Nishino,T., Harada,A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yamamoto,R., Matsumoto,H., Sakaguchi,S., Ikeqami,T., Kashiwaqi,K., Fujiwake,S., Inoue,K., Tronawa,Y., Izawa,M., Ohara,E., Watahiki,M., Yordada,Y., Ishikawa,T., Ozawa,K., Tarinka,T., Matsunta,S., Kawai,J., Okazaki,Y., Ishikawa,T., Ozawa,K., Tarinka,T., Matsunta,S., Kawai,J., Okazaki,Y., Muramatsu,M., Incue,Y., Kira,A. and Hayashizaki,Y. Kira, A. and Hayashizaki,Y. Sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (10-JUL-2000) Yoshihide Hayashidaki, The Institute of Physical and Cheminal Fareach (RTRN), Inducatory for denome Exploration Posecarch Comp. REN Genemic Sciences Center (65C), RIKEN Yokohama Institute; 1-7-22 Suchire cho, Fsurumi ku, Yokohama,
Eukatyota: Metazou: Chordata: Craniata: Vertebrata: Euteleostomi;
Mammalia: Eutheria: Rodentia: Sciurognafhi: Muridae, Musinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Functional annotation of a full-length mouse cDNA collection Nature 40% (8821), 685.6% (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lanaka, L., Tejima, Y., Toya, L., Yamamura, T., Yamanaka, L.,
Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M. and
Hayashizaki, Y.
                                                                                                                                    Carolor: Fland Bayoshioting
High-efficiency Iuli-length cDNA cloning
Meth. Enzymci. 303, 19-44 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 1364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genome Res.
20530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11217851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20499474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21085660
                                                                                                                                                                                                                                                                                       84774753
                                                                                                                                                                                                                                                                                                                                        10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                      KELEKEN'E
                                                                                                                                                                                                                                                LIKNAL
                                                                                                                                                                                                                                                                                            MEDINE
                                                                                                                                                                                                                                                                                                                                   PUBMED
                                                                                                                                                                                                                                                                                                                                                                                         KEFEKENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        POHMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REPERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MELALINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MELAL INE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PUISMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PHURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TVNAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PHIPMAI
```

§ 3		COLLEGE CONTROL OF CON	7
5	4.6,7		426
101	4.		, £66
2.5	427		486
-	466	GEGAAAAATGITITGAAAAATTTTATGGGTTTTATAAATTGAGTTGGAATTGTAG	1053
5	487	TCTAATGGCTTCCAGAGGTTGAAAATCTTTCTAAACGATACGAAGAAAAAATTTATCTTAAA	546
<u> </u>	1054		111
5	5.47		606
4	1114	AACAAAGITTAGATGAGAGGGGGTTTTTGGGTCATGATAAAAACACTTCAGATGATGTTTTTGGGTCGTCGTTGATGATAAAAAAAA	117 4
25	607		999
=======================================	1174	ATAGACACITTTGAAACAGAGACGCCACGAAAAAAAAAAA	1233
<u>^</u>	6.6.7		726
£	1214	Great for progressing the control of	1294
<u>^</u>	171	-	786
4	12'14	ATTITAAATTCTGCAAGTGATCAGCCATCAGAAAATCTGTTTGCTGCTAGTTGATAGC	1353
7.0	787	-	
â	1 4',4		

Search completed; January 18, 2003, 04:08:22 Job time : 2756.8 sees



Copyright (c) 1993 - 2003 Compagen Ltd.

numbers search, using sw model w micheje

January 16, 2003, 15:20:22 ; Scarch time 2965.48 Seconds (without alignments) 18469.506 Million cell updates/ser Kun on:

US 09 026-459A 48 Litle: Perfect score:

Frighting Control of C Sequences

Gapop 10.0 , Gapext 1.0 HARNTITY NUC Scoring table:

16154066 seqs, 8097743376 residues Searched:

Criduri. Total number of hits satistying chosen parameters.

Minimum DB seq length: 0 Maximum DB seq length: 20000000000

Fost processing: Minimum Match 100% Maximum Match 100% Listing first 45 summaries

FS1: * initaliase :

em_estba:*

4b 0815; 4cm e811um; 4cm e810um; 4cm e82. hum; 4cm e88. hum; 6cm e88. hu em 48s Vri: *
em 48s Vri: *
em 48s mam: *
em 48s mam: * em est in:
em est in:
em est ov:
em est pu:
em est pi:
em est pi:
em est pi:
em est pi: qb est1:* qb_est2:* qb_htc:* qb est4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

om_dss_othor:* em_dss_bro:* em_dss_rod:*

Pristal II.	910.2 909.4		 풀 : 프쥬	criath of 1D 1023 13 BM450031 1051 13 BM561083	Lescription BM45031 AGENCOURT BM561083 AGENCOURT
~	85.6		14	BQ439221	BQ4 19221 AGENCOURT
47	75.2.4		1	BM545881	BM545881 AGENCOURT
ű	745.4	* : -2	÷	9 ALS97811	ALS97811 DKF2p3130
÷	4.64,9	7.07	c.	BG£19551	BC610661 602611848

ALLEINMENIS

```
Joshann skin, Verter, pCMV-SPORTG, Site_1, Not1, Site_2: Sall, Cloned unidirectionally. Primer: Oligo dT. Average insert size 2 kb. Tibbary verstrands by Eff.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.771 CAAANTGAAGAATATAGACTTAAAATTOAAAATGATAGTAACAGGATACAAGGATCTTGC 2030
                                                                                                                                                                                                                                                                                                                                                                                                                 2.31 ICALOCHETTOAGGAGAGAT LOAAAGGIGITTIGA LOAAAGAGAGAGAGAGAL (1904) 2090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.51 TICCANNAGGCCCCCIACCIIGICACCAAIACCICACAAITCCFCGAAGCCTTANAAGT: 2210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2211 ICCIAGIICACCCTTACGGATTCCTGGAGGGAAGATGTATTTTGAGGGGTGG 2270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 * 41 AGTATOAATIGGTGAATCATTGGGGACTTCTGAGAAGTTGGAGAAAIAAAIGAGAIGGT 2390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     247) GAAAAANTACGOTTIGATATIGAAGGATCAGAIGAAGGAGGAGAIGGAAGIAAACAICICCC 2510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  257] AAAGPAGAAAFGAAFGATAGOTAGGATAGGTGAAAGAAAGAAGAAGAAFGAGGAFGGAFGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2631 GGACCTIGGIGGACACTGTCACACTCIGGATTCATTGICTCTCACACAGATGTCACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-31 TAACTITCCCAGGTTCTGTTTATGGCCACATITAAIATCTTCAGCTCTTTTTGTGGGATAT 2750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2711 AAAAIGIGGAGAIGGAAFFGITTF--GGGFGATTCCTAAGGGAGTTGAAATGTTAGTTT 2808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 TCATGOTGTTCAGGAGAGAGAGAGGGFFFGAACAAAAAAAAAAGAAGAAGAAGAFGTAF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541 AGGAGAGTCCAAATITCAAAAATGGCAGAAATGAATTATAATTAATTAAAAAATGCA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               72) TAACITICOCAGGIICIGITITAIGGCCACATITAAIAICIICAGCICITIIGIGGAIAI 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6; Gaps
                                                                                                                                                                                                                                                                                                                                                         241 ICCIAGITICACCCITACGGAITO TGGAGGAACAPOPATAFITA ACO O TGAAGACO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 910.2; DB 13; Length 1023; Pred. No. 4.10-172;
                                                                                                                                                                                                                                                                                               43; Indels
                                                                              /tissur-type "melanatic melanama"
/lab_host="DH10B (phage-resistant)"
                                                     /clone_lib="NIH_MGC_72"
/fissur *Ygo "moldfortic moldfoma"
                                                                                                                                                                                                281 t
                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                     Average insert size 2 kb
Technologies."
/db_xref-"taxon:9606"
                                     Actore "IMAGE,5528037"
                                                                                                                                                                                            197 g
                                                                                                                                                                                                                                                        26.9%;
95.2%;
                                                                                                                                                                                                                                                                             Best Local Similarity 95.2
Matches 972; Conservative
                                                                                                                                                                                                  34 3
                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                               Best Local
                                                                                                                                                                                                                   RICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ÷
```

```
/note "Organ: eye; Vector: pCMV-SFORU6: Site_1: Not1: Site_1: Sall; Cloned unidirectionally. Friner: Olido dI. Average insert size 1.75 kb. Library constructed by Lite Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                BM561083
AGENCOURT_6566133 NIH_MGC_67 Home sapiens chuA cione iMAGE.5555995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota: Motacca, Chordata, Chariata, Vertebrata, Eukleostomi; Mammalia; Eutheria: Primates: Catarrhini; Hominidae: Homo. [ [hases 1 to 1051] NIF-MSC http://mgc.nci.nih.gov/. NIF-MSC http://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Gene Collection (MSC)
                                                                                                                                                                                                2859 1.0101-01010101AAAACTAAAATTGGTGTGGTTLAIGGA.AGTAAGAA.GG-- 0001 2924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1129 AAAGCTGGGACACGGTTGTGTGAAATTGGATGACAGGGATAGAAGTTGGAGTTGGAGTTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1189 THREATTAN SHARATSHANIN CATANATON AND TOTAL SHARAN SANGAR CATATANA 1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA Library Preparation. Life Technologies, Inc.
ThM Library Arrayed Fy. The L.M.E.S.E. Conscrition (LLNL)
DNA Sequenching by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found throughthe 1.M.A.G.E. Consortium/LLNL at:
Plate: LLAM12263 row: m column: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              841 GEHATETARGAGATEGAAAATETTGEGAALEGEGAATTAAAAAGTEGEAGA 900
                                                                                                                                2) Gapto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 AFARAPERTRARANGTIGTGFORAATIGGAIGGGGAIACAAACTIGGAGITGGC 60
                                                                                                                                                                     292F AGAPTOGGAPTTGTTGATAAGGGAGGGTGTGTGAGTTTGGGGTTGTTTTGGAGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 13; Length 1051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissuc_type="retinoblastoma"
/lab_host="DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 909.4; DB 13;
Pred. No. 5.9e-172;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ~ ;
--!
                                                                                                          4 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact, Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib-"NIH_MGC_67"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone-"IMAGE:5550905"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High quality sequence stop: 737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xrei-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: cgapbs-remail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Oualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 197 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tissue Produrement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BM561083.1 GI:18806043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26,98;
98,48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                             5', mknA
BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human.
                                                                                                                                                                                                                                                               2985 A 2985
                                                                                                                                                                                                                                                                                                        1021 A 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                       RESULT 2
BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                  Locus
                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>ب</u>.
د
                                                                                                                                냨
```

```
HC4 49.2.1 EST 24 MAY 2092
ADENCOMEL_776562 NIH MOY 92 HOMO SAPIENS CONA CLONE IMAGE:6015480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1289 AAAAAAGIGIATGGGTIAGGTIAGCIGGGGLAAAIAGAGTTTGTGAAGGGGTTGTGTGTGT 1848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1909 TATGAACTCATGAGAGAGAGGATTTGGACGAAATTATGATGTGTTCCATGTATGGCATA 1968
                                                                                              FOUR GAGGLIGIAATGGCCANAFATABGAAGTAGATOTGAGAATGTTGATTGTGGAAGAGAGAGAT 1368
                                                                                                                                                                                                                                                                                 1/69/TTFCTTTFCCQATGGATFCTGAATGTGCTTAATTTAAAAGGCTTTGATTTTTACAAAGTG 14/28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14.29 ATCCGAAGTILLALCAAGGGAGGGAACTIGACAAGGAAATGALAAAACALTTAGAA 1488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1489 CGATGGAACATGGAALCATGGAATGCCTTGGATGGGTCTGAGATTCAGGTTTATTTGAT 1548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1549 CTIATIAAACAATCAAAGGAGCGAGAAGGACCAAGIGAAGIIGAAIGGGIIGIGGI 1608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1609 CLIAALOTEOOPPAGAATAATGAGAGOGGAGAATATGTATGTEGOOGTAAGA 1668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1889 TOTOPAANAAAAAGGI CAACTAGGGG GTAAATIGTACTGGAAATGGAGAGAGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1729 GYAMOTCAGOGITECAGOGOAGOGATEGAAATGIAGAGIGIGITIGACIGIIIIAI 1788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1849- GAGGAGGAGAATTAGAAGATATGATGTGTGTTTTTGGGGAGAGAGAGAGAATGAG 1908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1969 TOMAAAGTGAAGAAFAFAGACCTTAA-ATICAAAATGATTGTAAGAGGATAGAAGGATCT 2027
                                                                                                                                      THE THEFT HITTER THE STATE AND A STATE OF THE OF THE STATE OF THE STATE OF THE OF THE STATE OF THE 
                                                                                                                                                                                                                                                                                                                                   4.21 PELIALIAAAPAATPAAGGAPGAGAGGAGGAGTGGATGTGAGGTTGAAATGTGTTGTGCT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       841 TGGAAAGTSAAAGATATAGACTTAAANATTCAAAATGCTTGTAAGAAAGATAGCAGGATGT 900
12) AALITIAGGAAACITSTGAAFGAGAAAATITITGAIATGICTITATGGGGIIGGGGTGTT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              401 ALCHARACITITATCAAAGCAAGCAACTIGACAAGAAAAATGATAAAACATITAGAA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           461 CGATGTGAACATCGAATCATGGAATGCCTTTGCATGGCTCTCAGATTCAGCTTTATTTGAY 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481 CITAATCITCCCCAGAGAATAATCACAGAGAGATATGTATCTTCTCCCTGTAAGA 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              National Institutes of Health, Mammalian Cene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2028 ICCICATOCICITICAGGAGACALIGAAAGGIGI ITTGATGAAAGAAGAG 2079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NIH MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BQ4 39211.1 01.21178297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 1081)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , mKNA sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HQ4 19221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROVISE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PURKAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PESULF 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HU4 19221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Souther E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3×.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ĩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
```

Contact: Robert Strausberg, Ph.D. Email: cqapbs remail.nih.gov

. WME.N.

```
/tissuc_type="embryonal carcinoma, cell line"
/lab_host="DH-OH (phage resistant)"
/note="cogan: lestis: Vector: pkWV SpeEC; Site.1: Not1:
Site.2: Sall; cloned unidirectionally; oligo dF primed.
Average insert size 2.5 kb. Library enriched for full-tength clones and constructed by Life Technologies.
Note: this is a NHE-MEC library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2665 CATTGTCTCTCACAGALGIGACIGIAIAACH FOONAGH CHUHHHHHHHHHHHHHHHH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2485 GAAGCAGATGGAAGTAAACATCTCCCAGGAGAGTCCAAATTTCAGAAACTGGAAACTGGAAAA 2544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2845 TGCCATTTAAAAAGTTGTAGCAGATTGTTTGCTTCTAAAAGTAAAATTGCTGTGTTTTA 2904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2905 TOGATACTAACAATCOCCCTAGACTGCGACTICFICATAACCCAGGATTGTTGTGATTATT F 2964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3085 ITTIGAL IGACIGGCCAL ICACCAAATTA FROTGAACH OT ICHOPAAAAA IGGALA HALA 1344
                    eDNA Library Preparation: Lite Technologies, Inc. chA. Library Arrayed by: The ...A.A.6.E. consortium (LLNL) blan Sequencing by: Ademont Hosefence Corporation Clone distribution: MGC clone distribution: MGC clone distribution into an Except
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 ATGACTICTACTCGAACACGAATGCAAAAACCAGAAAATGAATGATGATACGAATACTTCA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GAAGCAGATGGAAGTAAACATCTCCCAGGAGAGTCCAAATTTCAGCAGAAACTGGCAGAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2545 ATGACTICTACTCGAACACGAAAIGCAAAAGCAGAAAIGAAIGGAIAGGAIAGCIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2605 AACAAGGAAGAAAATGAGGATCTCAGGACCTIGGIGGACACIGIGIACACTCTGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181 CATTGTCTCTCACAGATGTGACTGTATAACTTTCCCAGGTTCTGTTTATGGCACATTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2965 TGCCTTCTTTGTAGCATATAGGTGATGTTTGCTCTTGTTTTTATTAAAHHAIAHATATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2785 AAGCCACTTGAAATGTTACTCATTGTTATTATACAAGATTGAAAATCTTGTGAAAATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 AIAIGIIGAGIGIIIIIGIGAAIAIAAAAIGIGGAAAIGGAAIIGIIIGGGIGAIIGGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8025 ITTTITIAATITAACAIGAACACOCTIAGAAAATGIGCCIATOTATOTACAAAAAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2725 ATATICHTCAGCTCTTTTGTGGGATATAAAATGTGGGGAATGCAATGTTTGGGGGGATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Store mass.
Prod. No. 30-151;
Prod. Trebus 5; Indets 5;
                                                                                                                   found through the L.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             U; Mismatches
                                                                                                                                                                 Plate: LLAM14211 row: k column: #1
                                                                                                                                                                                                                                                                     /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25.3%; Score 856;
99.1%; Prod. No. 3d
                                                                                                                                                                                                                                                                                                                                          /clone_lib-"NIH_MGC 92"
                                                                                                                                                                                               712.
                                                                                                                                                                                                                                                                                         /db_xret-"taxon:9606"
/clone-"1MAGE:6015480"
                                                                                                                                                                                                                    Location/Qualitiers
                                                                                                                                                                                               High quality sequence stop:
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 99.19
Matches 892; Conservative
                                                                                                                                                                                                                                           1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                SOUTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HASE COUNT
                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  :.
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ĉ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
```

```
of three ovaries, from females ranging in age from 38 to 49 yo. Library is olign-dT primed and directionally cloned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BM545881
AGENDOURI_5505183 NIH_MGC_125 Homo sapiens cDNA clone IMAGE.5588245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (BCGNV site is destroyed upon cloning). Average instructions 2.1 kb, hesert size range 1.3.5 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Pessench Geneties tracking only 036.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Anote "Organ, ovary (pool of 3), Vector, pCMV-SPORT6, Site_1: EcoPV (destroyed); Site_2: NotI; PNA source pool
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukarjota Motanda Chordata, Cramiata, Wortebrata, Buroloustomi,
Mammalia: Euthoria: Primates; Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                            **25 GAACTTACTGATTATTTTCTTCATCCAACTTATGTTTTAAATGA-GGATTATTGATAGT 3383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2350 LINGOGAMITOTORGARAMITOTAGAAAATAAATGAGATGITATGIAACAGGGACGTGIG 2409
                                                                                                     12.5 GATATAAAGGTGGGTTGTTTATAAAATTTTGTTTTAATTAAATAAAAGGTGGAAGCAA
+145 TAGAAATTAGAAAAAATTACTAATTTTACACATTAGATTTTATTTTACTATTGGAATCT 3204
                                                                                                                                                                                                          265 AGTATARCCATATGATACTACTACTACTGAAACAGATTTCATACCTCAGAATGTAAAA 3324
                              Tissue From unchard. Invitiogen conv. Library Preparation: Lite Technologies, Inc. CDNA Library Preparation: Lite Technologies, Inc. CDNA Library Arrayed by: The LIM.A.G.E. Consortium (LLNL) MAS Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the LIM.A.G.E. Consortium/LiM. at: Plate: LLMM12359 row: a column: 14
                                                                                                                                                        720 GATATACTGTGTGTGTTTTATAAAATTTTGCTTTT-ATTAAATAAAAGCTGGAAGCAA 778
                                                                                                                                                                                                                                     1 (bases 1 to 1122)
NIH MGC http://mgc nci nib qow/
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6, Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22.2%; Score 752.4; DB 13; Longth 1122; 95.6%; Pred. No. 1.7e 140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred, No. 1.7e 140,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  359 t
                                                                                                                                   "Suggerish-"Hode sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib-"NIH_MGC_125"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         High quality sequence start, 48
High quality sequence stop: 773.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_arel="(axon:9606"
/clone="IMAGE:5588245"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             weation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: cqapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    216 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POST-"DHINE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BM545881.1 GI.18778365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    185 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 95.69
Matches 427; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5', mRNA sequence.
BM545881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cooks Wardh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NEED NOT SEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  - KCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE ' TINT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWARDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J-THRNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RM545881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . M. WW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Z ISIY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      :
:::
                                                                                                                                                                                                            8
```

2410 CTCAAAAGAAGTGCTGAAGGAAGCAACCTCCTAAAGCACTGAAAAAACTAGGCTTTGAT 2469

249 HISTAGAST FOLGARAAGH FOGAGAAA FAAAFGAGAFGGTATG FAAGAGGGAGGTGTG 299

```
linear FSF 14 AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Editorial Metalina, Chordata, Craniata, Vertebrata, Entelecatomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. (bases 1 to 727)
Poustka, Wellenrouther, R., Mewes, H.W., Well, R. and Wiemann, S.). PST (Poustka, A., Wellenrouther, R., Mewes, H.W., Well, P. and Wiemann, S.).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2770 GIIIGGGIGAIIGCIAAGGACTIGAAATGTIAGICAITGIIATTAIACAAGATIGAAA 2829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3010 TAATTTATA-TGTATATTTTTTTATTTAACATGAA-CACCCTTAGAAAA.GLCCLA 3066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2470 athraaagrahparahpaappaagraarpsaagraaaskapsiggaggasastggaaattigas D529
                                                                                                                                                                                                                                   2590 AGCATGGALACTECAAACAAGAAGAAGAAAGGAGAGACATCAAGGACCTTGGTGGACACTGT 2649
                                                                                                                                                                                                                                                                                                                                                                                                     2830 ATTTTTTTTTTAAATTTTGTAFTTAAAAGTTGTAGGAGGALFGTFGTFGTTGTTGTGGAAGTAA 2889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3067 ICIATCIICCAAAIGCAAIIIGAIIGACIGOCCAIICAGGAAAATIALGCIGAACTCIIC 3126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3127 TGCAAAAAT-GGATATTATTAGAAAATTAGAAAAAATTACTAATTTACACATTAGATTT 3195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1018 IGCAAAANIGGGAAAITAITIAGAAAIIAGAAAAAIIACIAAIIIITGCCCIAAAAAII 1077
360 ATTGAAGGATCAGATGAAGCAGATGGAAGTAAACAICICCCAGGAGAGTCCAAAIIICAG 419
                                                                                                                                                                                           420 CAGAAACTGGCAGAATGACTTTCTACTCGAACACGAATGCAAAAGCAGAAATGAA 479
                                                                                                                                                                                                                                                         660 GTTTGGGGGGATGATTCCTAAGGCACTTGAAATGTTAGTCATTGTTATATACAAGATTGAAA 719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DMEZPilivoOMi6_r1 313 (synonym: hice) Homo sapiens cDNA clone
DMEZpilivoOM16 5', mPNA sequence.
                                                                                                                                                                                                                                                                                                                       2650 GTAFARFTFTGGATTFATTFFTFTFAAGATGTGTGTATAAGTTTGGGAGGTTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     727 hp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3186 TATITIACTACTICGARTA 3210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1078 TATITIACIATIGAAAAACGGAATA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ALS9781] 1 GI:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AI.597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      итап.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OPGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A1,597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FOCUS
                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ä
```

```
2571 AAAGCAGAAAATGAATGATAGCATGGATACCTCAAACAAGGAAGAAGAAAATGAGGATCTCA 2630
                      34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20.7%; Score 699.6; DB 12 94.8%; Pred. No. 6.5e·130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            271 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plate: LLCM1605 row: o column: 11
High quality sequence stop: 709.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone-"IMAGE:4737634"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lissue Procurement: DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: cqapbs-r@mail.nih.qov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            142 g
                                                                                                                                                                                                                                                                                                                                                                                                   BC610661.1 G1:13662032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Library."
148 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 94.83
Matches 779; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . 823
                                                                                                                                                                                                                                                                                                                                                                mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                               2481 ACATICAN 2487
                                                                                                                                                                                                                        721 AGATGAA 727
                                                                                                                                                                                                                                                                                                                                                                                 BG610661
                                                                                                                                                                                                                                                                                                                                                                                                                                             human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Source
                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                     HG610661
                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                 RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                            q
                                                                                                                                       qq
                                                                                                                                                                                 ੌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note-"Vector: pTriplEx2; Site_1: StiIA; Site_2: StiIB; cDNA-collection"
                                                                                                                                                                                                                    Heidelberg/Germany) within the cDNA sequencing consortium of the
                                                                                                                                                                                                                                                      No.s1 sequence available.
This clone (DKFZp31800816) is available at the KZPD in Herlin.
Please contact the KZPD: Ressourcenzentrum, Heubnerweg 6, 14059
Herlin Challotenburg, GERMANY: Email: clone@rzpd.de.
                                                                                                                                                      Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKFZ); Email's wiemann#dbfr heidelberg.de;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1761 GAAALOTAGGTGTGTGTTGGGTGTTTTATAAAAAGTGTATGGGGTAGGGTATGGGGGT 1820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1881 COTITICOAGOACACCOTGCAGAATGAGTAIGAACTCATGAGAGAGAGATTTGGACCA 1940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1821 AAATAGACITTGTGAACGGTTCTGTGTGAGGAGCCAGAATTAGAAGATATCATCTGGAC 1880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1941 AATTATGATGTTCGATGTATGGCALATGCAAAGTGAAGAATATAGAGCTTAAATTCAA 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001 AATCATTCLAACACATACAACGATCTTCCTCATGCTCTTCAGGGGGGACATTCAAAGGTGT 2960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2061 TTTGATCAAAGAAGAGGAGTATGATTGTATTATAGTATTCTATAACTCGGTCTTCATGCA 2120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2121 GAGACHGAAAACAAATATTTTTCACTTTCCACCAGGCGCCTTGTGCTTGTCACCAAT 2180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2181 ACCICACALICCI COAGCCCITACAACTIICCIACTIICACCCIITACGGAIIICCICGAGC 2240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2241 GAACATCTATATTTCACCCTGAAGACTCCATATAAAATTTCAGAAGGLCTGCCAACACC 2300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2301 AAMAAAATGAGTGGAAGATGAAGATGTTAGTATGAATTGGTGAATTGATTGGGGACTTG 2360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         461 GAGACTGAAAAAAATATTTGCAGTATGCTTCCACCAGGCCCCTACCTTGTCACAAT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481 GAACATCIAIATITCACCCCIGAAGAGICCAIATAAAATITTCAGAAGGICTGCGAACACCC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GAAATCTACCTCTCTTTCACTGTTTTATAAAAAGTGTATCGGCTAGCCTATCTCCGGGT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21.4%; Score 7.5.4; DB 9; Length 727, 99.9%; Pred. No. 4.4e-135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         inde is
                                                                                                                                                                                               sequenced by DKFZ (German Cancer Research Center,
                  Department Lebrach
Max Planck-Institute for Molecular Genetics
                                                                                                                Email: poustkaampimq-berlin-dahlem.mpg.de
This is the 5' sequence of the clone insert.
                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="DKFXp31460816"
/clone_lib="314 (synonym: hlcc2)"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. 4.4e-135;
0; Mismatches 1,
                                                      Threstrasse 73, 14195 Berlin, Germany
Fel: 449-30-84131623
Fax: 449-30-84131128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         198 t
                                                                                                                                                                                                                                                                                                                                                                          /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                               Ath vrot-"tavon-ushas"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         130 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /lab_host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Poustka A.J.
                                                                                                                                                                                                                                         German Genome Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 99.9
Matches 726, Conservative
                                                                                                                                                                                                                                                                                                                                                          727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E 84.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                            SOUTUR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HASE COUNT
                                                                                                                                                                                                                                                                                                                                     FEATURFS
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>-</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
```

```
/clone_ib="Nih_MOC_60"
/tissue_type="adenocarcinoma"
/lab_host="DB10B (T1 phage-resistant)"
/note="Organ: prostate; Vector: pDNR-LIB (Clontech);
/note="Organ: prostate; Vector: pDNR-LIB (Clontech);
/ic_1 Sfi: (Hacagastave); Site_2. Sfi: (Hacatalgast);
/ic_1 sfi: (Hacagastave); Site_2. Sfi: (Hacatalgast);
/ic_1 sfi: (Hacagastave); Site_2. Sfi: (Hacatalgast);
/ic_1 sfi: (Hacagastave); Site_2. Sfi: (Hacatalgastave);
/ic_2 squence: Site_1 Strand of the continue and sequence: Site_1 Strands Strands Site_1 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HG610661
602611848BT RIH_MGC_60 Homo suplens clar clone IMAGE:4737634 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryola, Metazoa, Chordata, Craniatu, Vertebratu, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2511 AGGAGAGUCCAAATUTCACCAGAAACTGGCAGAAATGACTTCTACTCCAACACAACAACA 2570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA Library Preparation: CLONETBEH Laboratories, Inc. CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                      1 (bases 1 to 823)
NIH-MGC http://myc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Laboratories (Palo Alto, CA). Note: this is a NIH_MGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2421 TGCTGAAGGAAGCAACCCTAAAACCACTGAAAAAAACTAAAAAATTAAAGTTIGALATIGAAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 12; Length 824;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
```

```
FST 10-AFP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eutolenstami;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ROSS01312P1 KTH_MGC_77 Bomb sapiens onna cloue IMAGE:4717874 57,
                                                  2691 TAACTIICCCAGGITFTGITAIGGFCA/AFFIAATAFFIT/AGFYTF/AGFTTFFFF/34AFAF 2750
                                                                                                                                                                                                      2751 AAAAIGIGGAGATGTITGGGGAATTCTTAAGCCACTIGAAATGTIAGICATTGI 2810
                                                                                                                                                                                                                                                                           2811 TATTTATACAAGATTGAAAATCTTGTGTGTGGCGYTTAAAAAGTTGTAGGAGATT 2870
                                                                                                                                                                                                                                                                                                                                                   2871 GTTTOOTOTTOOAAAGIAAAATGOTGOTTTAAGAAAIAGFAAAAAAAAAAAAAAAAGAAAGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                             2931 GGAGTOOTGATAANNOANINGANIAHTIANITITANITITITITITITITAANATATATAANA 2990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299] IGIIIGCICTTGTTTPPPATTAFATTAFATGTATGTGTPPPTATTATTATATACAEGAACACCCT 3050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VILL TIATCTIGAACICHCUGGAAAAATGGAATTATTAGAAATT---AGAAAAAATIACTA 3167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4228 AAAATITIGGITITAAITAAAIAAAAGCIGGAAGCAAAGTAIAAAGAIAIAAAGAAAGTAIGA 3287
                                                                                                                                                                                                                                                                                                                                                                        401 TATTTATACANSATTSAAAATSTTSTSTRAATGCTGCCASTSAAAAAGTTGTAGCAGALT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                  481 IGITIGCICTIGIATITATIAATITAIGIAIATITITITATITAACAIGAACACCCT 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GGACCTTGGTGGA/ACTGGGA/ACTGGA/ACTCTGGATTGATTGATGCGCCATGGATGTGTGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601 ITATCCIGAA/ICIICIGAAAAAAAGAATAITATTAGAAAAT/AAAAAA/AQAATTAATA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NIH MSC bilp.//mac.ncl.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MSC)
                                                                                                                                                                                                                                                                                                Füharyda, Motadan, Chardata, Classata, Vostebiata, Dateba
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
                                                                          4288 TACTACTGAAACAGATTTCATACCTCAGAATGTAAAAGAACT 3329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IACIAIIGAA - - CAGATICATACCICAGAAIGTAAAGAACCI 816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BG570456
BG570456.1 GT:13578109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 767)
NIH MSC http://mgc.n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTESS TON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    THURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BG570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PERSON 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSEEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                               9
                                                                                                                                                                                                                                       QC.
                                                                                                                                                                                                                                                                              ें
                                                                                                                                                                                                                                                                                                                90
                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
```

```
CDNA Library Preparation: CLONTECH Laboratories, Inc. CDNA Library Arrayed by The T.M.A G E Consortium (LLNL)
Tissue Procurement, CLONTECH Laboratories, inc.
```

```
2591 GIATGGAINT FTAAAGAAGAAGAAGAAGAATGAGGATGTGTAGGACCTTGGTGGACACTGTG 2650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2771 ITTGGGTGATTCCIAAGCCACTIGAAAUGITAGTCAITGTIATUATAGAAGATGAAA 2830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2711 TATGGGGGGATTTAATGTTGGGTGTTTTTGTGGATATAAAATGTGGAGATGGAATTG 2770
DNA Sequencing by: Incyte Genomics, Inc. Clone distribution information can be found through the 1.M.A.G.E. Consortium/LLNI, at: Plate: LLCM1568 row: h column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9951 PTATPTAADTAPTTAAPTTTTTTTTTTAAAATATAGSTSAIGITTGGTTTSTTTTATT 3618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1011 AATTTATATGTATATTTTAATTTAAGATGAAGAGGGGTTAGAAAATGTGTGCCTATGTA 3070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3130 AAAAATGGATATTATTAGAAATTAGAAAAATTACTAATTTTACACATTAGATTTTATT 3189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3190 HEACEAFFOGAAFFPARAFACEGGFFGFFFFFFFAFAAATFFFGCFFFFAAFFFAAFF 3249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241 ICTIGITAAATCCIGCCATITAAAAAGIISTAGCAGAATTTCCICTICCAAAGTAAA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                48] TCTTCCAAATGCAATTGCATTGACTGATTCACCAAATTATCTGAAATTATCTGC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541 AAAAATGGATATTATAGAAATTAGAAAAAAAATTACTAATTTACACATTAGATTTTATT 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18; indels 4; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GCATGCATACCTCAAACAAGAAGAAATGAGGA ICTCAGGACCTTGGTGGACACTGTG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2651 TACACCTCTGGATTCATTGTCTGTCTCACACATGTGAGTGTATAACTTTCCCAGGTTCTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 TFTGGGTGATTCCTAAGCCACTTGAAATGTTAGICALTGTTTTTTTTACAAGATTCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2831 TCTTGTGTAAATGCTGCCATTTAAAAAGTTGTAGCAGATTGTTTGCTGCTGTTGCAAAGTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NOTE TO FORMAMENDAME FOR FRACTION CANDEAU AND ANALYZED CONTINUES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2891 ATTGCTGTGCTTTTATGATAGTAGGAAGGGCGTAGAGTGGGAGTCCTGATAAGCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 692.2, DB 12, Length 767;
Pred. No. 26-128,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                         /organism="Homo sapiens"
                                                                                                                                                                                           /db_xref="taxon:9606"
/clone="!MAGE:4717874"
                                                                                                              High quality sequence stop. 726
                                                                                                                               Location/Qualifiers
1. .767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10.5%;
11 Similarity 97.1%;
747; Conservative C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Lecal Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           233 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                       sonrce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
```

```
BMA56194 Titera: EST 05-FEB-2002
AJENCOURT 6456973 NIH_MGC_92 ROMO SADIEUS CONA CLONE IMAGE:5576939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Anote-Torque testis: Vector: pCMV-SpORT6, Site_1: Not1; Site_2: Sall; Cloned unidirectionally; Oligo dI primed. Average insert size 2:5 kt. tibrary enriched for tul-length clones and constructed by tife Technologies. Note; this is a NIH_MGC library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukarysia, Motassa, Chordata, Graniata, Vertebrata, Euteleostosi,
Mammalia: Eutheria; Primates; Catarrhini; Hominidae; Homo.
4250 AAAAWTEGAAWAAAWAAAWOATATGATACIATCATAGTACTAGAAACAGATTICATA 3309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25.27 CAGGAGAAACTGGCAGAAATGACTTCTACTCGAACACGAATGGAAAAAGCAGAAAATGAAT 2586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2647 EGEGLAPAPOTOTGGALLGALGECICACAGALGTGACTGTATAACTTLCCCAGGTTG 2706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2707 IGTTTATGGGGACATTTAATATGTTGAGGTGTTTTTGTGGATATAAAATGTGCAGATGCA 2766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            coNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Biosecience Corporation
Clone distribution: MRC elementaries in incremation on be
tound through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 GATAGOALGGATACCTCAAACAAGGAAGAAAATGAGGACCTCGAGGACCTTGGTGGACGC 120
                                             660 AAAAGCTGGAAGC AAGTAFAACCATATGATACTATGATACTAATGAAAGAGATTTCATA 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 PATPADAADIGGGAGAADIGGCITCIACICGAACAAGAAAAGCAAAAGGAAATGAAT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20.4%; Score 691.8; DB 13; Length 972; 96.7%; Pred. No. 2.4e<sup>-</sup>128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="embryonal carcinoma, celi line"
/lab_host "DH108 (phage=resistant)"
                                                                                                3357 COTCAGAALGE AAAAGAACTIACTGATTAT FITCHTCATCCAACTTAT 3357
                                                                                                                              219 OTTAMBANGSAAGTIACHTIAN TITITI TITITI TITITI TETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (mdc) 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cONA Library Proparation: Life Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred, No. 2,46-128;
0: Mismatches 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             http://image llnl gev
Plate: LLAM12329 fow: j colonn: 12
High quality sequence stop: 621.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                323 :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /ordanism-"Homo sapiens"
/db xret="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /elone="lMAGE:5576939"
/elone_lib="NIH_MGC.92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NIH-MGC http://mgc.nci.nih.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: eqapbs-r4mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           169 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -
                                                                                                                                                                                                                                                                                                                                                                                   BM466194.1 GI:18515236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 972)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              184
                                                                                                                                                                                                                                                                                                                                     , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . 97.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                               BM466194
                                                                                                                                                                                                                                                                                                                                                        BM466194
                                                                                                                                                                                                                                                                                                                                                                                                                                      human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 728;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CR: ANTSM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FULLE
FULKNAL
                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FFATURES
                                                                                                                                                                                                                               RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NICH N
                                                                                                                                                                                                                                                                                                                                                                                                                                      T. ET S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ē
                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
```

```
BM453724 Right Refer to FEB 2002 Attentional EST 05-FEB 2002 AttentionPT_640274 ^{\circ} NIH_MG222 Boxe sapiens of NA plane iMA25.55.28814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. (Chases I to 835)
NIH MGC http://mar.nci.nih.qov/.
National institutes of Health, Mammalian Gene Collection (MGC) Oppublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="IMAGE:S52884"
/clone=lib="NHLMSC.72"
/lab=lost="HHUBH (phage resistant)"
/note="organ: skin; Vector: pWMV SWORKS; Site 1: Noil:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3127 TGGAAAATGGATATTATTAGAAATTAGAAAAAAHTACTAATTTTAGATTTT 3186
2767 ATTGITTGGGTGATTGGTAAGGGACTTGAAATGITAGHATTGITATHATAAAATTG 2826
                                                                                                                                                                                              2947 ASCCHOTOTOACTACTITIGCOTTIGITAGOATATAGOTGATGITIGGLOTTOTTIT 3006
                                                                                                                                                                                                                                                                                                                                                                                          8007 TATTAATTTATATGTATGTTTTTTAATTTAACATGAACACCTTAGAAAATGTGTCCTA 8066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8067 ICINICIECCANATGCANTELONIESACIGECCALLONETANAMALLADECTECANOCITA 3126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3187 ATTITACIATIGGAAICIGAIATACIGIG-----IGCTIGITITAIAAAATTITGCTTTT 3241
                                                                                                2827 AAAATCTTGTGTAAATCCTGCCATTTAAAAAGTTGTAGCAGATTGTTTC"FCTRCAAAG 2886
                                                                                                                                                                                                                                                                                                                                         421 AGGCCTGTCTGACTACTTTGCCTTTTTGTANCATATAGGTGATGTTTGCTCTTTTT 480
                                                                                                                                                                                                                                                                                                                                                                                                                 601 IGCAAAAATGGATATTATTANAAATTAGAAAAAATTACTAATTITACACATTAGATTT 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA Sequencing by: Ageicourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLML at:
                                                                                                                         361 IAAAATTGCTGTGTGTATAGAATAGAATGGCCTAGAGTGGGAGTCCTGATAACC 420
                      241 ATGTTGGGGGATCCTAAGCCACTGGAAAGTTAGCATGTATTAAAAATTG 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tissue Profurement: ALCY/OCH/FOLD CONDITIONS inc. CONA Library Preparation: Life Technologies, Inc. CONA Library Arrayed by: The I.M.A.G.E. Consortium (ILNL)
                                                                                                                                                                                                                                                                                                                   3242 ANTIANATANANGCT-GGAAGCAAAGTATAACC 3273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bitp://imagé.llnl.gov
Plate: LLAM12206 row: e column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721 ATTAAGATAAAAAGCTGGGAAAGTATAAACC 754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D. Email: eqapbs-rémail.hih.qov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 835
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  High quality sequence stop: 647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HM453724.1 GI:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5', mkNA sequence.
BM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NOITINIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      * CIOSES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BM454724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                             q
                                                                                                ò
                                                                                                                                              <u>a</u>
                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                         ं
                                                                                                                                                                                                                                                                                                                                    â
                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ź
```

```
·:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BIBABITA Linear EST IL COT 2001
60339233001 WIW_MOT_40 Home Sapiens enha clone IMAGD:5402622 57,
Site_2+ Galf; Cloned unidirectionally. Primer: Oligo dr
Average insert size 2 kb. Library constructed by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       har Mohampar Phondatar Phasiata, Vertebrata Potenbestosi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    113 IAAAAAAGIGTAICGGCTAGCCCAICICGGCTAAATACACTTTGTGAACGCCTTCTGTC 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                1488 ACCATCTCAACATCCAATCATCCAATCCTTGCATGGCTCTGGGTTCAGATTCACTTTGA 1547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1948 INTIALIAAACAAFCAAAGGGGGGGAGGAACGAACTGAFCAACCTFGAAFCFGGFFGGTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-08 TOTTAATOTTOGTOTOCAGAATAATOACACIGCAGAGAGATAIGIATOTTOTOCIGTAAG 1667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1728 ACCAACCICAGCCTTCCAGACCCAGAAGCCATTGAAATOTAOOTGTTTTA 1787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ITRE TAAAAAASTOTATOOSOSTAACOSTOSSITAAATAINTAITESTOSAASSISTITITIOTOT 1847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1848 TGAGGACCCAGAATTAGAAGATATCATCTGGAGGGGTTTTTTCGAGGACACCCTGCAGAATGA 1907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28 28 EPGICATGRIGHTGAGGAGAFALTFAAAGGTGTFTTGATGAAAGAAGAGGGGTATGATTC 2087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2088 TALTATAGTATTGTATAGTGGGTGTTGATGGAGAGGAGGAAAGGAAAGAAATGTTGCCAGTA 2147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HITTELLITER OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY AND A STORY OF THE PROPERTY OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.33. GIALGAAM LOATGAGAGAGAGATTTTGGAGGAAATTTATGATGTGTTTGTGATGTGTGTTTTGGGATT 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    554 TCCICATGCIGITCAGGAGACATICAAACGIGITTGATCAAAGAAGAGGGGTAIGAITC 512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13 ACGAIGTGAACATCGAATCAIGGAATCCCTTGCAIGGCTCTCAGATTCACTTATTTGA 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length R35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                            1 others
                                                                                                                                                                                                                                                                  Scorp 678; DR 13; I
Prod No 1 4e-125;
                                                                                                                                        233 t
                                          Average insert size 2 kb. lechnologies."
                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                              137.9
                                                                                                                                                                                                                                                                       20 0%. S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B1868359
BI868359 : AT 16042032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2148 IGCIICCACCAGGCCCC 2165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   673 TGCLICCACCAGGGCCCC 690
                                                                                                                                   210 G
                                                                                                                                                                                                                                                                                                                                                           Matches 678; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Home sapiens
                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                   254 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Earkary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                   ERCAN SM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTESS 1. N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYW :RDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
```

NIH-MGC http://mgc.ncf.nih.gov/.

(bases 1 to 672)

REFERENCE AUTHORS

```
/note="Organ: liver; Vector: pCMV'SPORT6: Site_1: Not1; Site_2: Sall, Clored unidirectionally; oligo-dI primed. Average insert size 1.7 kb. Library enriched for full length clouds and constructed by Life Technologies. Note: this is a NHTMGC Library."
                                                                                                                                                    Email: cgapbs-r@mail.nih.gov
Tissue Procurement: AiCC
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by, The I.M.A.G.E. Consolium (LINE)
DNA Sequencing by, Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information, can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2249 ATATTTCACCCICAAGAGICCATALAAAALIGAGAAGGICTGCCAACACAACAAAAA 2308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2489 CAGATIAGAASTAAA/AYOOOGAGGAASIOOAAATITCAGGAGAAACTGGGAAAAAGA 2548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2309 TGATTTTAAGAITAAGAATTITAGTATTAATTGGTGAATTATTGGGGGGTTTTGAGAAGT 2368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2549 CITCIACICGAACACAAAAAGCASAAAAIGAAIGAAIGAINGCAIGGAIACCICAAACA 2608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2789 PAPTHGAAATTTTAGTPATTGTTATTTATGAAGALIGAA AAIGTLGIGIAAA.GTLGG 2847
Mallonal Institutes of Health, Manmailan Gene collection (MGC)
Ompublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2429 GAAGCAAGCTGCTAAAACCACTGAAAAAGTAGGCTTTGATGAAGGATGAGATGAAG 2488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2729 STEGATOSTITITICIONATAINANATSSSANSSANTISITISSITISSINATOSINASS 2788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            285 310 FOR A AMERICA TOTATA ANTERNAMEN SEED SELLAS SOCIONALITATION STATEMENT STATEMENT AND SECOND S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 CAGATGGAAGTAAAGATGTGGAGAGTGCAAATTTCAGCAGAAACTGGCAGAAAIGA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481 CITCASCICTITITIGICGATAIAAAAIGIGAAIGCAAIIGTITGGGIGAIIGCIAAGG 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ATAITICACCCTGAAGAGICCAIAIAAAAITICAGAAGGICIGCCAACACACAAAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181 GANGGAAGGTGTGTGAAGGAAAAAAGGTAGGTTTGATATTGAAGGATCAGAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2609 AGGAAGAGAAATGAGGATGTGAGGAGGTTTGGTGAGACGTGTGTACACGTCTGCATTTAJT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19 5%; Score 660; DB 13; Length 672; 39.9%; Pred. No. 5.7e 122; tive 0; Mismatches 0; Indels ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type-"adenocarcinoma, cell line"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              found through the I.M.A.G.E. Consortium/ILINL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /lab_host "DH10B (phage resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      http://imagc.linl.gov
Plate: LLAM12026 row: k column: 07
High quality sequence stop: 668.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_"IMAGE:5402622"
/clone_lib="NIH_MGC_90"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref "taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 671; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HASE COUNT
     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>-</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
```

```
/hote-"ordan: cervix: Vector: pGMV sPOR16; Site_1: Not1; Site_2: Salt; Cloned unidirectionally. Primer: Oligo dl. Average insert size 1.5 kb. Library prepared by Life Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryola; Metazoa; Chordata; Craniata; Verrebrata; Buteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
2848 CALTTAAAAAGTEGTAGGAGAITGTITGTIGTAAAAGIAAAATEGCIGTGCTTTATGG 2907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20.66 CTGTTCAGGAGACATTCAAACGTGTTTTGATGAAAAAAGAGGGGGGTATGATTGTATAGG 2095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2096 IATTOTATAACTOGGGGTGTTCATGCAGAGACTGAAAACAAATATTTTGCAGTATGCTTGCA 2155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2156 COAGGGGGGGGALGTGAGGAATACGTGAGATGGTGAAAGGGGTTACGTA 2215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2216 GITCACCCTTACGGATTCCTGGAGGGAACATCTATATTTCACCCTGAAGAGTCCATATA 2275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2276 AAATITCAGAAGICTGGGAAGAGGAAGAAAAIGACTGGAAGAAGAAGAATGITAGIAI 2335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HILLETTELL FELTETTELLETTELLETTECTEGGAAAGTAAAATTGETGGFFFFFFFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UNA Sequencing by: Incyte Genamics, Inc. Clone distribution: MGC clone distribution information can be tound through the L.M.A.G.E. Consortium/LLML at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19.0%; Score 643.6; DB 10; Longth 797;
95.8%; Pred. No. 1.1e-118;
1ive 0; Mismatches 24; Indels 9; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 CTGTTCACCACACATICAAACCTG-TTTCATCAAACAAGAGGAGTATCATTATAG 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA Library Preparation: Lite Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDNA Library Arrayed by: Incyte Genomics, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  http://image.llnl.gov
Plate: LLAM8427 row: t column: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /Ordanism-"Homo sapions"
/db_xrot "taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999)
Contact: Robert Stransberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zelone lib "NIH_MGC_10"
Zeell line="MGC36"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stop: 696.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIH MGC bitp://mgc nci nih gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone-"IMAGE: 3449873"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: egapbs remail.nih.gov
lissue Procurement: Alcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local ion/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               167 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /lab_host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                     RE519278.1 CT:9767924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         95.88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 797)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 747; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11,13
                                                                                            2908 ALACTAAGAAIG 2919
                                                                                                                                         661 ATAGTAAGAATG 672
                                                                                                                                                                                                                                                                                                        mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                             Rome sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0 777
                                                                                                                                                                                                                                                                                                                                      RE2 177.18
                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Querry Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOUTH
                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                111LE
JOJENNI
                                                                                                                                                                                                                                                                                                                            APPESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AULHORS
                                                                                                                                                                                                            RESULL 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H. NEMERIAL
                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                       HIS 44278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PEATURES
                                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MMEN
                                                                                                                                                                                                                                                                                                                                                                                                  SOURTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <del>-</del>3
```

```
/lab_host="DH1OB (il phage resistant)"
/hote="ordan: testis: Vector: pDNR-LIB (Clontech); Site]);
Slil (gasegretegage), Site_2: Slil (gasealtatagee);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 18 APR ZUEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota, Motazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Bukaryota, Motazoa, Chordata, Craniata, Vertebrata, Eutheria, Monasia, Catarrhini, Hominidae, Homo, L. (bases 1:0-681).
NIB MAT hitp. Zómir nei nih pesy.
National Institutes of Health, Mammalian Gene Collection (MSC).
                                                2336 CAATHGGTGAATCATTGGGGACHTTTGAGAAAHAAAHAAAHAAAHAAA 2395
                                                                                                                                                                                                                                 2515 GACTICCAAATTTCACCACAAACTGGCAGAAATGACTTCTACTCGAACA +CGAATGCAAAA 2573
                                                                                                                                                                                                                                                                                                                                                                                                                    2634 COTTGGTGGACACTGTAPACCTGTGATTCATTGTCTCTCACACATGTCACTGTATA 2693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2694 CITTCCCACCITCICITIALGGCCACALLIAALALCITCACCITITITITICAALALAAA 2753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2754 ATGTGCAGATGCAATIGIIIGGGIGAIFCTIAAG CACTIGAAAIGIIAGFAHGGTTAT 2813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BG616219 681 bp mKNA linear EST 18 APR 602644717F2 NIH_MCC_61 Home sapiens cunA clone, NAGE, 4777532 57
                                                                                                                                                                                                                                                            cDNA Library Preparation: CLONETECH Laboratories, Inc., CERA Library Artaged by The I.M.A.G.E. Consortion (LLNL) blund Sequencing by: Incyte Genemics, Inc. Clone distribution: MCC clone distribution indocesses become can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Double-stranded cDNA was prepared from cell line RNA.
239 AAATTTCAGAAGGTCTGGCCAACACAAAAAAATGACTCCAAGAATCTTAGTAT 298
                                                                                                                                                                                     539 GCAGAAATGAATGATAGCATGGATAGCTCAAACAAGGAAGAAATGAAATTCAAAA 598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          599 CCTIGGIGG-CACTGIGIACACCTCTGGATICATIGICTCTCACAGAIGIGACTGT TTA 656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2396 ACAGCGACCGTGTGGCTCAAAAGAAGTGCTGAAGGAAGCAA-CCCTCGCTAAACCACTGAAA
                                                                                                                                                                  found through the 1.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /tissue_type "embryonal carcinoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plate: LLCM1650 row: b column: 05
High quality sequence stop: 679.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib-"NIH_MGC_61"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone-"IMAGE:4775442"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: cgapbs rémail.nih.qov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BG616219.1 GI:13667590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mkNA sequence.
BG616219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTILARS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BG616219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCUS
                                                ò
                                                                                                                                                                                   ą
                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                             11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                             ć
                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
```

```
(where B = A, C or G and N = A, C, G, or T) Average insert size 1.75 kb (range 0.9.4.0 kb) 15/15 colonius contained inserts by PCF This library was enriched for full-length clones and was constructed by Clontech Laboratories (Palo Alto, CA). Note: this is a NIH_MGC
and 3' adaptors were used in cloning as Iollows: 5' adaptor sequence: 5'-CACGGCCATTATGGCC-3' and 3' adaptor sequence: 5'-ATTCTAGAGGCCGAGGCGGCCGACATG-dT(30)HN-3'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2697 TOCCAUGITICIGITITATION CALABITATION OF TOTAL TITUTO TO ATTAIN AND 2755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2757 IGGAGA IGCAATTIGITTTIGGGPGATTICCTAAGCCACITGAAATGITTAGTGATTIGITATTTA 2815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2817 TACAAGATTGAAAATCTTGTGTAAATCCTGCCATTTAAAAAGTTGTAGCAGTTGTTTGC 2876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3:57 A(G)G)GC)ATGTATGTATGCAATGCAATTTGATTGACTGCCCATTCACCAAAATTATCC 3116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.1.7 IGAACICITCICCAAAAATGGATATTATTAGAAATTAGAAAAATTTACTAATTTTAGAC 3176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3.25 GAAAGAGATTITGATACCIGAGAATGTAAAAGAACTTACTGATTTTTTCTTCATCCAACT 3354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZBPP TOTTONAAATTAAAATTGGTGTGTTTTATGGATAGTAAGAATGGGGGTAGAGTGGGGAGTG 2936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      380 CICHELLITTALIAATITAVATGAATATTTTTAAATTTAACATGAACACCCTTAGAAA 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *** ATGIGHUGIAICIAICIIACCAAAIGCAAIIIGAIIGGGCCAIICACCAAAAIIAICC 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480 ALTAGALLITATTTTACLATTGGAATCTGATATACTGTGCTTGTTTATAAAATTTTG 539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540 CITITACAITAACAIAAAAGCIGGAAAGCAAAGTATAACATATGATACTATATATATT 599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 TCCCAGGITCIGITITATGGCCACATITAATATCTICAGCICTTTTTGTGATATAAAATG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19.0%; Score 642.2; DB 12; Length 681; 98.4%; Pred No. 2 1e-118;
                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                          œ
                                                                                                                                                                                                                              259 t
                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                 104 g
                       adaptor sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           **55 IAIGITITIAAAIGAGGAITA 3375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E.S.: TATGITITAAATGAGGATTA 680
                                                                                                                                                                                                                              108 €
                                                                                                                                                                                                                                                                                                                                                     Matches 670; Conservative
                                                                                                                                                                                                      Library.
                                                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                                                                                                                                                                                                                           COPIC March
                                                                                                                                                                                                                                 RASE COUNT
                                                                                                                                                                                                                                                      N O X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ē
```

3

5

Ξ

5 ÷ 5

```
Kawai,J., Shinagawa,A., Shibata,K., Yoshino,M., Itoh,M., Ishii,Y.,
Arakawa,T., Hara,A., Fukunishi,Y., Konno,H., Adachi,J., Fukuda,S.,
Alawa,A., Itakunishi,Y., Konoo,H., Adachi,J., Fukuda,S.,
Saito,M., Okazaki,Y., Orjobori,T., Horo,H., Kasukawa;I., Satto,R.,
Radota,K., Matsuda,H., Ashburner,M., Hatalov,S., Casavant,I.,
Fleischmann,W., Casaterland;I., Cissi,C., King,H., Kochiwa,H.,
Ruchl,P., Lewis,S., Matsuo,Y., Nikaldo,I., Pesole,G.,
Ouackenbush,J., Schriml,L.M., Staubli,F., Suzukli,R., Tomita,M.,
Radner,L., Washio,T., Sakal,K., Okido,I., Puruo,M., Anno,H.,
Haldarcili,R., Harshi,G., Hake,J., Moffelli,D., Bojunga,N.,
Fletchor,C., Pajita,M., Carthold,M., Oustincich,S., Hill,D.,
Hofmann,M., Hume,D.A., Kamiya,M., Lee,N.H., Lyons,P.,
Hofmann,M., Rodriduez,I., Sakamoto,N., Sasaki,H.,
Sato,K., Schonbach,C., Seya,T., Shibata,Y., Storch,K.F., Suzuki,H.,
Toyo-oka,K., Wang,K.H., Welte,C., Whittaker,C., Wilming,L.,
Marshiani,V., Voshida,K., Hasegawa,Y., Kawaji,H., Kohtsuki,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Adachi, J., Alzawa, K., Akahira, S., Akimura, T., Aono, H., Arai, A., Arakawa, T., Baldarelli, R., Bono, H., Brownstein, M., Bult, C., Carninoi, P., Eukuda, S., Fukunishi, Y., Furuno, M., Haraaki, T., Hara, A., Hayatsu, N., Hill, D., Hiramoto, F., Hiramaki, T., Hara, A., Hayatsu, M., Ishi, Y., Itoh, M., Izawa, M., Kasukawa, I., Kato, H., Kawai, G., Kojima, D., Kotho, H., Nouda, M., Nogars, F., Kurihara, C., Matsuyama, T., Miyataki, A., Nishi, M., Nomura, K., Kurihara, C., Matsuyama, T., Miyataki, A., Nishi, M., Nomura, K., Saite, R., Saite, R., Saite, R., Saite, F., Shinagawa, T., Miyataki, M., Shinagawa, T., Wamanaka, T., Yashina, Y., Toya, T., Yamamara, T., Yamanaka, T., Yashina, M., Muramatsu, M., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Carminci, P., Shibata, Y., Hayatsu, N., Sugahdia, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashiraki, Y. Normalization and subtraction of sup-trapper sciected consector prepare full-tendth cons. In the prepare full-tendth cons. In the science for rapid discovery of new genes Senome Pos. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Shibata, K., Itch, M., Aidawa, K., Nagucka, S., Sasaki, H., Carninci, D., Konoo, H., Akiyama, J., Nishi, K., Kiisunai, T., Tashiro, H., Itoh, M., Sumi, M., Ishia, Y., Nakamura, S., Hazama, M., Nishiae, T., Harada, A., Yamamoto, P., Maisuncto, H., Sakaquchi, S., Ikeqami, T., Kashikani, K., Yayama, Y., Ishikama, T., Yayama, Y., Ishikama, T., Yayama, Y., Tanaka, T., Matsuura, S., Kawai, J., Yonda, Y., Ishikawa, T., Zawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okacaki, Y., Muramatsu, M., Inoco, Y., Kira, A. and Hayashiraki, Y. Sequencing pipeline analysis (RISA) system—'84-tormat Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                             Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                Chordata: Graziata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and Hayashizaki,Y.
Fusctional ansotation of a full-leaveh acuse ofNA collection
Nature 409 (6821), 685-690 (2001)
                                                             clone_lib.RikEn full length chriched mouse cDNA library clone:2609017M22.
                                Mus musculus (strain.057PL/67) in days embryo
                                                                                                                                                                                                                                                                                          Carninci,P. and Hayashizaki,Y.
High efficiency full-length cDNA c oning
Meth. Enzymol. 303, 19-44 (1999)
99279253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 1364)
HTC; CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yasunishi,A.,
Hayashizaki,Y.
                                                                                                                                                       Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20530913
11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20499374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21085660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11217851
                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REPERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TANGUCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          471117
                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                    SOUPPUE
```

HTC 19 TAN 2002

AKO11246 Hear HTT 19 TAN 20 MENA liber HTT 19 TAN 20 Mus musculus 10 days embryo whole body cDNA. RIKEN full-length enriched library, Plose-2600017M22-refiseblas*oma 1, full insert

Contonios AK011246

ACCESSION VERSION

LEFTN: C. N

RESULT 14 AKA11246 LAGUS

```
1066 CC 1067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1363 CC 1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BM264009/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 14
                                                                       ें
                                                                                                                                      3
                                                                                                                                                                                                                                                                                â
                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ë,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ΟŅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          property mouse insures. First strand cbNA was primed with a primer by CoAcanadachach recharged religious thermography of the property by usual relations thermography of transcriptuse and subsequently enriched for full length by rap-trapper. Second strand cbNA was prepared with the primer addition of sequence [5] darkackacharly-redailtanarranderecececece (stranderecececece) and settle country and settle countr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ..
                                                        Physical and Chemical Research (RIKEN), Laboratory for Genome
Exploration Research Group, RIKEN Gemomic Sciences Center (GSC),
RIKEN YOCOLAMA Exitates 17–22 Suchiro clas, Isarumi Ku, YGKohama,
Kananawa 240-004, Japan (E-mail:qenome-reseasc.riken.qo.jp,
URL:DATQP/Zenewey per (Eken.qc.jp/, Tel-81-45-50, 9222),
Fax:81-45-504-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /translation-"MPPKAPKRAAAAEPPPPPPPPPREDDPAGDSGPEEDLARLEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ETERPETALCOKUKVPDHVREKAMLPWEKVSSVDGTLBGYTÖKKKEDWGTCTFTAAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEDEMPETER GASTER SVYKFFDELKETDI STRVDNAMSRELKKYNVLCALYSKER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RTCELIYLTQPSSALSTEINSMLVLKISWITFLLAKGEVLQMEDDLVISFQLMLCVVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YFTKESPPALLREPYKTAALPTNGSPRTPRRGGNRSARTAKGLENDTRITEVLCKEHE
CHIDEVKNVYFKNFTPFINSLGIVSSNGLPEVESLSKRYEEVYLKNKDLDARLFÅDHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib-"RIKEN full length enriched mouse cDNA library" /der stage "18 days emk_F yo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KTIOIDPIDSEELEKIPKKNNPDEEANVVIPHIPVKIVMNIIQUIMVILNSASDQPSE
                                                                                                                                                                                                                                                                                                                                                                                     Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                             Submitted (10 JUL 2000) Yoshihide Hayashizaki, The Institute of
                                                                                                                                                                                                                                                              Please visit our web site (http://genome.gsc.riken.go.jp/) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97. GAGGAMMAGAGGAGGAMAMAGGGGAMGGAMMATIGH GAGTTIGAA 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         157 GAAACAGAAGAACCTGATTTTACTGCATTATGTGAGAAATTAAAGATACCAGATGTGT 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGAGAGAGATIGGTIAATIIGGGAGAAAAGIIIGAICIGIGGAGAIGGAGIATIGGGAGGT 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     283 GAAALIGAAGAAGGGGALLIALIGCATLATGTCAAAAGTTAAAGGGGGGGGGGTGATGTG 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  u; Mismatches 142; Indels 171; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 648.8; DB 11; Length 1364;
                                                                                                                                                                                                                                                                                                                                                    CONA Library was prepared and sequenced in Mouse Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note-"data source.MGD, source key:MGI:97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Prod. No. 9.9e-118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db, xref -"FANIOM DB:2500017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          146 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db xret:"MGD:MGI:1905260"
/db xret "taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /protein_id="BAB27493.1"
/db_xret-"GI:12847244"
/db_xret-"MGD:MGI:97874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /orthiom "Mis mosculus"
/strain "CS7RL/6.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   $07 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone-"2500017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      law at honyonal iffers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NLTSYFNNCTVNP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zeodon start
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          evidence: ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /qeme="Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 46.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /dene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 G12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 46,4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .x. ...x.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HOST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Corry Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14.0 The est
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HASE, CUINI
                             JUST BANDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
301.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FLATGRES
                                                                                                                                                                                                                                                                                N. WW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N 1331 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
```

```
003 GTTTGTAAAAATTTTAICCCTTTTAIAAALICACITGGAATIGTAICAATTAAAATTOA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          946 CCACACACTCCAGTTAGGACTGTTATGAACACTATCCAACAATTAATGATGATGTTAAAT 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1006 TCAGCAACTCATCAACTTCAGAAATCTGATTTTCTATTTTAACAACTGCACACTGATT TU65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1303 TCTGCAAGTGAFGAGCALCAGAAATCTGATTFGTTTT TT TT THEFITTTT TAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  943 ACGAGGATTATCGAGGTTCTCTGTAAAGAAGAAGAGGTAAATATAGATGAGGTGAAAAATT 1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    76.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               766 CTTCCAGAGGTTGAAAA1CTTTCTAAAGGATACGAAAGAAATTTATGTTAAAAA1AAAAGT 825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  826 CHAGATGCAAGALTATTTTTGGATGATGATAAAAGTGTTGAGGATGALFGTATAGAGAGAGT 885
277 TATATTCAAAAGAAAAGAACTGTGGGGAATGTGTTTATTGCAGCAGTGTTGAA 336
                                                                                                                                               163 GATGAGATGCCATTCACTTTTACTGAGCTACAAAAAGCATAGAAAGCAGTGTGTATAAAA 522
                                                                                                                                                                                                397 TTCTTTAACTTAAAAGAAATTGATACCAGTACGAAAGTTGATAATGCTATGTGAGA 456
                                                                                                                                                                                                                                                                                                 457 CTGTTGAAGAAGTATGATGTTTGCACTCTTGACAAAT RAAAAGGACALGTGAA 516
                                                                                                                                                                                                                                                                                                                           577 CYAAAAGIIICIIGGAICACAIIIIIAIIAOCIAAAGGGGAAGIAIIAYAAAISIAAAAGI 636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            823 CCTCCTCCACTACTCAGAGGCCATACAAAGGGCTGCTCGCCATTAATGTTTGACTT 882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7.44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    523 TICTITGACITATIAAAAGAAATCGATACCAGTACCAAGGTTGATAATGCTAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    - -GAATTCLCLIGGACTIGIAACAICTAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     886 TTTGAAAGAGAGAAGAAGAAGAAAAAGIAAAAGITGATGAAGAGGGGGGAATGAAFFCCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7.35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   697 CCTCCCATGTTGCTCAAAGAACATATAAAACAGGTC
```

```
Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria, Primates, Catarrhin; Hominidae; Homos I to 618)
Metton, D. Brown, Kenty, G., Permutt, A., Lee, C., Kaestner, K., Lemishka, L., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S., Lemishka, L., Marra, M., Pape, D., Wylie, T., Martin, J., Histain, A., Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, K., Isaqaieishvili, K., Williams, T., Jackson, Y., and Bowers, Y.
         EST 18-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Applied once. Contact information. Blueshipt SE(+); Site_1.
Not!; Site_2. Xhot. chNA made by oligo-dT priming
Site_steries and agarese and Average insert size lkb. 5.
Xhot site was destroyed after directional cloning.
Amplified once. Contact information. Biroshi Inche. MD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Metabolism Div. (Alan Permutt Lab), Washington University School of Medicine, Box 8127, 660 Scith Eurlid Ave., St. Louis, Mo 63110, E-mail: hinoucefingate.wustl.edu, Tel: 314-362-1916, Pr. 314-747-2692."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Endocrine Pahereas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
HM264009
ig CECREXI HEBS islet Hemes sapleds clana 3' similar to SWERE HUMAN
P06400 RETINOBLASTOMA-ASSOCIATED PROTEIN ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Library was constructed by Dr. Hiroshi Inoue DNA sequencing by: Washington University Genome Sequencing Center For information on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2657 TYTGRATERATERTGTCTCACAGATGTGACTGTAIAACITTCCCAGGTTCTGTTAIGGC 2716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2717 CACATTTAATATCTTCAGCTCTTTTTGGGGATATAAAAHGTGCAGATGGAATGTGTT1GGG 2776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2836 CATTOCTAACCCACTTCAAATGTTACTCATTCTTATTATACAACATTCAAAATCTTCT 2836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.7 CACATITAATATCITCA.CTTTTTTTTCFGATATAAAATGTGCAGATGCAATTGTTTGGG 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      617 TOGCAGAAATGACTTCTACTCGAACACAATGCAAAAAGCAGAAAATGAAAATGATTGCATGG 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       O: Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 617, DB 13, Length 618, Pred. No. 2.3e 113.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    obtaining a clone please contact: Dr. Hiroshi inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1nde ls
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        //issue_type "Purified panemeatic islet"
//lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism "Homo sapiens"
/db_xref-"taxon:9606"
/elone_lib-"HRR5 islet"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                dmelton@biohp.harvard.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stop: 426.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Endocrine Pancreas Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seq primer: -400P from Gibro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   F BUL
                                                                                                                     BM264009.1 GI:17927049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bost Local Similarity 100.0%;
Matches 617: Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (hinome sim.wustl.edu)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                617-495-1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               617-495-8557
                                                                                                                                                                                                                 Homo sapions
                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Over, Match
Bost Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Serie Co
                                 DEPTNICH
                                                                                                                                                                                                              DRGANISM
                                                                                                                                                                                                                                                                                                  REFERENTE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
:
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11 D.E.
J. SENAE.
                                                                                            ACCESSI ON
                                                                                                                                                    KEYWORDS
SOURCE
                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RISIN
```

```
EST 12-JUN-2000
FPNA SOUTHBROW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 694)
Pids Noto, E., Garcia Correa, R., Verjorski-Almeida, S., Bricches, M.R.,
Nagai, M.A., da Silva, W. Jr., Zago, M.A., Hordin, S., Costa, F.F.,
Coldman, S. H., Carralho, A.F., Matsukuma, A., Haia, G.S., Simpson, D.H.,
Brunstein, A., deoliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare
M. , Sagres, F., Brentani, P.R., Reis, L.F., de Souza, S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Project. This entry can be seen in the following UR:
(http://www.ludwig.org/lt/smifrs/gribtmi2.ploth.stp.km?proff2.2]u
200-014-00668F-2000-02-01844-1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note"Torgan: breast; Vector: pue18: Site_i: Smal; Site_2: Smal, A mini: 1brary Was made by closing products derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This sequence was derived from the FAPESP/LICR Human Cancer Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bukaryeta, Metarea, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Frimales, Gatailhini, Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ludwig Institute for Cancer Research
Rug Prof Antonio Prodente 189, 4 andat, 01569-010, Sao Paric-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Shotque sequencing of the human transcriptome with war expressed
                                                                                                                                                                                                                                                            2837 GIAAAIGGIGGALIIAAAAAGIIGIAGGAGAIIGIIIGGIGIGGGAAGIAAAAIIGGI 2896
                                                                                                                                                                                                                                                                                                                                                            §017 IAIGTAFAPUTITIAAITIAAAIGAACACCTTAGAAAAIGTGTCTATCTACCTTCC 3076
                                                                                                                                                                                                                                                                                                                                                                                                                                                       3077 AAATGCAALH GATLGAGTGATTCACCAAAATTATCCTGAACTGTTGTGCAAAALG 3136
                                                                                                                                                                                           197 GACTACTTTTGTAGCATATAGGTGATGCTTGCTTGTTTTTALLAALTTA 138
                                                                                                                                                                                                                                                                                                                                                                                   Mutt. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RF082846 - HENA LINCAT PP2-PHO642-HPB- SUPPRES PPAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref-"taxon:9606"
/clone_lib-"BI0642"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          High quality sequence start: 58
High quality sequence stop: 669.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: asimpson ludwig.org.br
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /dev_stage-"Adult."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seq primer: puc 18 torward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BE082846.1 GI:8473151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3137 GATATTAGAAATTA 3153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tel: +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17 GATATTATTAGAAATTA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BE082846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20202663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Notatinidad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BE082846/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTIMPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MINIST TAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            811001
                                                                                                                                                                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                               ã
                                                                                                                                                                                                                                                                                                               Ę
                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ô
```

```
from ORESTES PCR (U.S. Letters Patent application No. 196, 716 ) Ludwig Institute for Cannar Popular Collins
                                                                                                             ,716 - Ludwiq Institute for Canter Research) profiles into the pUC B vector. Reverse transcription of tissue mEMA and cDMA amplification were performed under low stringenery conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1044 ITTTAACAACTGGGACAGTGAATGCGAAAAGAAAGTATACTGAAAAAGAGTGTAAAAGGATATAGG 1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1104 ATACATCHITAAAGAGAAATTIGCTAAAGTIGTGGGACAGGTTGTGTGGAATTGGATC 1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1164 ACACCATACAAACTEGGAGTECCTTGTATTACCGACTAATCGAATCCATGCTTAAATC 1223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1224 AGANGAAGAAGGATTATGGATTGAAAATTTTAGGAAAGTTGTGAATGACAACATTTTTGA 1283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1284 TAFGECTIALIGNOSTGCNOTICHIGAGGIIGIAATGGGGGACALAFAGCAGAAGTACATC 1343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1344 TOAGAATOLEGALEGEGGAAGAGAFILGTOTI FOOGA IGGATIGEGAATGEGGTTAATIT 1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1404 AAAAGGGTTGATTTTTAGAAGTGATGGAAAGTTTATGAAAGGAAAGGAAGGGAAGTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1464 AAGAGAAALGATAAAAGAFTTAGAAGGATGTGAAGATGATGGGAATGGGTFGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1584 TGATCACCTTGAATCTGCTTGTCCTCTTAATCT TCCTCTCCCAGAATAATCACACTGCAG 1642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1643 PAGATATGTATTTTTTTTGTAGATGTPCAAAGAAAAAGGTTGAAFTAGGGTGTAA 1702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                THEFTER FOR ANALOGOUS GRAND THE STATE AND ACADE AND ACT AND ACT AND ACT OF A STATE AND ACT OF A STATE AND ACT OF A STATE AND ACT AND A STATE AND A STA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    683 TAFFITAACACTOCACACTO ALCCAAAAGAAAGIATACTIGAGAAGAGTGAAGGATATAGG 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       444 TATGLCTTTATIGGCGTGCGTGCGTGGAGGTTGTAATGGCCACATATAGGAGAAGTACATC 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           124 AAAAGGTIIGAIITIIAGAAAGIGAIGGAAGITTTAICAAAGCAGAAGTTGAC 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       144 BATCACTICAATCICCTESTCTCTIAATCICTCTCTCTCACAATAATCACAATGAGG 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match 18.1%; Score 614; DB-10; Longth 694; Loral Similarity 97.3%; Pred. No. 9.3e-113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16; Indels
                                                                                                                                                                                                                                                                                                                                                1 others
                                                                                                                                                                                                                                                                                                                                         226 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                         127 4
                                                                                                                                                                                                                                                                                                                                                      ं
े
-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 645; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1703 ATT 1705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local s
                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ===
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
```

--

Search completed: January 18, 2003, 04:11:17 EACTING : 2939,56 Secs

	,	
		,

```
Copyright (c) 1993 - 2003 Compagen Ltd.
```

```
January 17, 2003, 18:15:29 : Bearch time 4795.71 Seconds (Without alignments) 6578.212 Million cell updates/see
nucleic search, using frame_plus_p2n model
minterior W
                                                  Run on:
```

.....TRMQKQKMNDSMDTSNKEEK 871 #\$ 09 026 459A 49 4496 Litle: Perfect score:

1 MPPKTPPKTAATAAAAAEP Meapop 10.0 , Meapoxt Yeapop 10.0 , Meapoxt Feapop 6.0 , Feapoxt Delop 6.0 , Delext BLOSUM6.2 Scoring table: Sequences

2054640 seqs, 14551402878 residues lotal number of hits satisfying chosen parameters: Securedad

Minimum LAB seq length: 0 Maximum LAB seq length: Z000000000

Fost processing: Minimum Match 100% Maximum Match 100% Listing liest 45 summaries

'command line parameters:

Model. Hanner paramone beverally
U-Fig. 185172 (Converge paramone)
U-Fig. 185172 (Converge paramone)
U-Fig. 185172 (Converge paramone)
U-Fig. 185173 (Converge paramone)
U-Fig. 185173 (Converge paramone)
UNITS-185173 (Converge paramone)
UNITS-185173 (Converge paramone)
UNITS-185174 (Converge param

qb un: *
qb vi: *
em ba: *
em lun: *
em lun: * qb ro:* qb sts:* qb_ba:* qb_htq:* em om:* em foat:* om re: db sy:∗ **★**:DM MO: 4b, om: * qb_pat:* 45 p. 1.4 om ph:* db_ina:* # - 750 Her Constitution . batabase

em_vi:* em_btq_hum:* em_btq_inv:*	em_htq_other:* em_htq_mus:* em_htq_pln:* em_htq_rod:*	em_htq_vrt:* em_htq_vrt:* em_sy:* em_sy:* em_htqo_hum:* em_htqo_mus:*
29: 40: 31:	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	3.7 3.8 3.9 4.0 4.1

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		9			SUMMARIES	
Result		Vitorio Vitorio				
S	Score	Match	Match Length	ĩ	(1)	beset iption
-	7	6.85	5464	æ	AR09196.5	ARGS 1965 Sequence
7	4447.5	6.86	7667	œ	AR098189	
~	4447.5	6.86	2994	9	AR207841	ARZ07841 Sequence
4	7	6.86	5667	Φ	87.500.97	HD00972M Lissue sp.
u^	4447.5	6.86	2994	9	181465	181465 Sequence 2
٩	447.	5.85 5.	2444	5	HUMKHSA	MZ8419 Human retin.
7	4	ଟି. ୫୫	4600	ō	HUMRBA1RA	Mittel Human retin
æ		ි. 86	4835	ē.	AX3 40701	AX (10701 Sequence
<u></u>	4447.5		4849		HUMRB 1 MRNA	L41870 Homo sapien
10		68.7	5667	۵	AR144797	AR144797 Sequence
11	4349.5	67.6	4740		HUMRHS	M15400 Human retin
35	43B9	3 26	4203	Ų,	105 311	105311 Sequence 1
13	4382	97.5	4597	w	109369	
14	4302.5	95.7	4580	9	A01444	
15	4044	6.68	4591	9	E12560	E12560 cDNA encodi
16	4036		4591	10	MUSPP105RB	M26391 Mouse retin
1.7	3924		4132	2.	RATER	L25244 Rattus norv
96.	3863.5		3232		AR072031	ARC72031 Sequence
61 U	3863.5		3232		AR072042	ARG72032 Sequence
50	3863.5		4232		118496	Il8496 Sequence 1
0 21	1863.5		42.42		118497	Iln497 Sequence 2
C4 C4	3192.5		4541		CDRES INE	X72218 G.domesticu
23	3187.5		1456	5	U00113	Doella Sallus qall
24	2606		2808	u'	NVREI I NBP	YOUZZE N.virideson
្ស	2581	57.4	1554		AF230742	AF230742 Canis fam
90	3 3 4 3	6.83	4386		AF102861	AP102861 succerbyne
5.7	2197.5	48.9	2730		AY008289	AYCCHIES ONYLIAS 1
97 7	1011	۲. دور	944	u^	AY125075	AY125075 Danio rer
58	801.5	17.8	4853	9	AR038597	
30	801.5	17.8	485 \$	Ŷ	AR059584	ARDS9584 Sequence
Ţ	801.5	17.8	485.4	5	HSP1 40K	X76061 H.sapiens p
3.5	799.5	17.8	4.60	5	BC0 44490	RC034490 Homo sapi
er er	796.5	17.7	444H	5	867171	St7171 Rbr Z-retin
34	768.5	17.1	1235	0	MMU 3 3 4 2 0	Uttstam Mus museulu
ζ.	266	17.0	486.4		MMU27177	0.27177 Mus muscultu
3,6	765	17.0	1960		HOMP107B	L.14812 Human retin
3.7	764	17.0	4130	_	AX281827	AX281827 Sequence
9E	756	16.8	4872	C	BC020528	18,070,78 Wus musca
64	755	16.8	401	10	MMU50850	USONSO MUS musculu
40	7.5	16.7	4861	10	15556.27	D55627 Raffus norv
4		9.91	4304		BC032247	BC032247 Homo Sapr
42	7 3 7	16.4	4806		WW0 367 99	utusemis museulu
4	726.5	16.2	380H	Ţ	HUMP107A	M74547 H.Sapiens r
44	721.5	16.0	2808	9	AR078225	ARCTBLLS Sequence
45	721	16.0	4513	10	MM047333	U47444 Mus muscalu

AL LUNMENTS

5000			•			
SEP-		20 198 40 258	50 318 80 378		140 558 160 618	180 678 200 738 220 798
linear PAT 08-	2044 871 0 0 2	Met ProbrockysThrProArdbysThrAlaAlaThrAlaAlaAlaAlaAlaAlaAlaAlaAlaAlaBrocker 11111111111111111111111111111111111	AsplemProLeuValArgLeuGluPheGluGluThrGluGluProAspPheThrAlaLeu	VALCETE (PALABEST TYVALLEGGG TYG) TYYTT TOOTHLYSLYSLYSG TALEAUT DG THE	Statysakan Leglat LeserValitis Eysphepheasan LeuLeuLysglut LeaspThr 111111111111111111111111111111111111	LeupheSerlysLeuGluArgThrCysGluLeuIleTyrLeuThrGlnProSerSerSerSer ++++++++++++++++++++++++++++++++++++
994 bp DNA 5998134, DNA F suppressor and FP-1999; Wn" 808 t	Longth: Matches: Conservative: Mismatches: Indels: Gaps: (1-2994)	#laalaThralaalaal 	51	0.y.yri.colnuysby 	LysPhePheAsnLeuLk 	
AROGIA65 AROSIGO 4 from patent US 599 AROSIGO 5 1 ci.10018719 GARGONA 6 1 ci.10018719 GARGONA 6 1 ci.10018719 M Unclassified 6 1 to 2994) Local Core.E.YH.P. Relinoblastoma gene-cancer su Relinoblastoma gene-cancer su Relinoblastoma gene-cancer su Ferlinoblastoma gene-cancer s	2. Garn-210 4447.50 93.868 93.868 94.868 6 A P28 6 AR 928 871) × ARU91965	SThrProdrqLysThr HILLIHIHIHI AACCTCCAAAAAN GELOPLOPLOPLOPLO HILLIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHI			eGLulleSerValHis 1111111111111111 AGAATCAGTGTCCAT 1AspAsnAlaMctSer 111111111111111111111111111111111111	
AR091965 AR091965. AR091965. AR091965. AR091965. Unclassiff Unclassiff Lec Wases Lec Wases Lec Wases Lec Wases Lec Wases Lec Wases Lec Wases Lec Wases Lec Wases Lec Wases	nment Scores: . No.: .vvtocal Similarity ; Mirch: garder,	Met.Proprody, 111111111 ATGCCGGCCAA Froald710Pb CCGGGCCACCAA CCGGGCCCCAA CCGGGCCCCAACCGCGCGCCCCCCCC	AspleuProLe 	Valocrectva 	Serthright Serthrigsva AGACCAAGT	LeuPheSerLy (111,111) (1CTTCAGGAA (111,111) AIATCIACTGA Aiatys31y31 (111,111) (31AAAGGASA
ARCSLOS DOCUS DOCUS DOESTNOTON ACCESSION VERYWORDS SCHOOL REVENING AUTHORS LITLE JOHNNAL FEATURES SCHOOL BASE CONFES SCHOOL SCHO	Alianment Pred. No.: Score. Percent Si Best Local Query Mira DB: US:09:026	C) 139 C) 47 C) 139 C)	99 41 35 259 49 51 196 419	•	45 45 45 45 45 45 45 45 45 45 45 45 45 4	CQ 1619 ED 619 CQ 181 ED 673 CQ 25.1 ED 7.2

Q.y.	221	221 CysVallenAspTyrPhelleLysLeuSerProProMetLeuLeuLeuLysGluBroTyrLys 40 	240
7.0	241	Thr	243
Ė	g 128		918
Oy	243		243
ģ	919	GNAGGGATVAGGAAAAAAAAATVAGAAAATGAAGAATTVAT IGAAG FTCTGTG LAAAGAA	878
č	243		243
qu	626	CAHGAAHCHAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATTTTTATACCTTTTATG	10.48
Q. 4	244	AsnSerteeGlyteeuValThrSerAsnClyteuProCluValCluAsntcuSertlysArg	263
a a	507	ANTICICI ESSACTISTAACALCI AATISGACTI CCAGAGGITGAAAATCI TICTAAACGA	#. 101
8 B	1099	TYTO CTYT. CULTABABIL TSASP. CUARRA "ATGLOTHER, CUARRETSASP. THE	283 1158
S 2	1384	LystirLeuGlathraspSerlleAspGerFheGlathrGlaArgInEroArgiyaSer 	
<u>a</u>	u :	AAAACTOTT AGACTGATTOTATAGACAGTTTTGAAACACAGAGAGACACGAAAAAGT	2 7
oy do	304 1219	AshicuAspGludiuValAshVailicProfroFisfhFroValAtgThrVaiMetAsh 	323 1278
ΟŅ	324	Thr Heding Incometment leteoasnSeralaSeraspoinProSerd Hashler Hillill	3.4.3
q	1279	ACTATICCAACAATTAATGATGATTTTAAATTTCAGGAAGTGATGAAGGTTGAAAATGTG	33.88
0 O	344	IleSerTyrbheAssAsnCysThrValAsnProLysGluSerTleLeuLysArqValLys 	463 1398
Οÿ	36.4	Aspilled your replace year by the Alangs Alava to by Chadly Cysval Glu	
qq	1399	GATATAGGATACATTTAAAGGAAAATTTGCTAAAGGTGTGGAAAAGGTGTGAAA	1458
9.5	384	1.eG)ySerGlnArg?yrLysLeuG)yVa\ArgLeufyrTyrArgVa\MetG\usermet 	
a 2	1459	ATIGGAIGAGAGATAGAAAGTIGGAGITGGTTGTATTAGGGAGIAAIGGAAIGCAIG	1518
ζς Q:	404 1519	LOULYSSERGISTORGESTARTORGESERGESTARTORGESERGESTLYSIONLONGGESERGESTARTORGESERGESTARTORGESERGESTARTORGESERGESTETT IN THE	423 1578
.O.	424	!!orhoHisMotSort.cul.euA.acysAla.cuG.ava!vaiMotA.arlrrrserArg	443
. q 	1579	ATTITION TATE OF TATACHER ATTITION TO A TATAC	1638
OY	444	SerfhrSerGinasnikeuAspSerGiythrAspLeuSerPhebroTrplleLeuAsnVal	463
gc :	1639	ACHACATCTICAGATCTTGATTCTGGAACAGATTTGTCTTTTCCCATGGATTCTGAATGTG	1698
දු දු	464 1699	LeuAsnieulysAlabheAspPheTyrLysVallleGuuSerheIleLysAlaGluGly 	483 1758
NO NO	484	Asnicethrang until clash is contrared vschill says I lement gluder	
qq	1759	HITTELLITELLE HITTELLE HITTELL	1818
QY	504	LeuAlatrpLeuSerAspSerProLeuPheAspLeuTletysGInSerLysAspArgülu	r, 2,
00	1819	CTPGCATGGCTCTCAGALICACCLLIALLIGALCLIALIAAADAALYAAAGGGCGGAGAA	1878 1
ô	524	ClyProThrAspHisLewCluSerAlaCysProLewAsnLewProLewGlnAsnAsnHis	8 7 5

1938	563 1998	. m .	603 2118	623 2178	01	663 2298	~ ~	_	723 2478	743 2538	5 5 25	e 01	803 2718	823 2778	843 2838	863 2898	
GENTREE FEET FEET	VVAIArgSerProLysLysClyscrThr 		Protectlys Set Thi Set LeutSet LeutPetyrtys Lys Valtyrarg Leualatyr Leu FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FECALIGAAATG LACETCE FELLEAGAGAAAG IGTATGAGAAAAAG FELLET FELLET FELLAAAAAAG IGTATGAG CEAGAGAG FELLAGAAAAAG FELLAGAG FELLAGAGAG FELLAGAGAAAG FELLAGAGAG FELLAGAGAGAG FELLAGAGAGAG FELLAGAGAGAG FELLAGAGAGAG FELLAGAGAGAGAG FELLAGAGAGAGAGAG FELLAGAGAGAGAGAG FELLAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGA	- Ardbendsüffür Geuchschutzgleulbeuserdhulfisprodhuleuchulfishelle 	<u> </u>	ASPGINITOMATMATCYS TITTLITITITITI GACCAATTATGATGIGI	4 = = = = = = = = = = = = = = = = = = =	Arg HH CGT		ProlleProffis11eProArqSerProTyrLysPheProSerSerProLeuArqIlePro 	CIYCIYASINITCIYLITCSCPPOLOULYSSCPPOLYYLYSTICSOFGUGIYLON 7 	The Prothily SM-C the Proatgepard Helen TELETITETETETETETETETETETETETETETETETETE	Thr SerdlutysPhedlutysTleAsndluMetValCysAsnSerAspArqValLeutys 	Ardseraladiudiyserasmproprolyserceutystysteuarquyeaspilectu 	OTYGETASPOTOA GASPOTYSELEYSHIS LEULT OOLYGTUSELEYSPIEGING INDINLYS 	44 Lenalaglumetthrsefthrargthrargmetglblysglblysmetasnasparmet 86: 	Aspitrsorashiysgibgibiys 871 [TELLITITITITITITITITI GATACCTCAAACAAGAAA 2922
18 /·	54.4 28.9.1	564	584	604	624	6.44	664	684	704	724		764	784	804 2719	8777	844	86.4 2899
<u>a</u>	S S	07 13b	5 3	5 3	U7 EE	5 G	5 €	5 G	Σ ξ	5 8	5 G	20 G	5 a	5 43	5 g	5 2	45 65

RESULT Z AR098189

```
FAT 14 FEB 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            259 GACCTGCCTCTCGTCAGGCTTGAAGAAACAGAAGAACCTGATTTTACTGCATTA 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101 llcCysllePhellcAlaAlaValAspheuAspGluMetSerPheThrPheThrGluLeu 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181 IleSerThrGluIleAsnSerAlaLeuValLeuLysValSerTrpIleThrPheLeuLeu 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         221~{\rm GysVall}{\rm cuAspTyrPhellelgsLcuScrPyroProMctLcuLcalgsGlabbol}_{\rm FLlys} 240
                                                                                                                                                                                                                                                                                                                                                                       21 ProAlaProProProProProProGluGluAspProGluGlnAspSerGlyProGlu 40
                                                                                                                                                                                                                                                                                                                                                                                                                     09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80
                                                                                                                                                                                                                                                                                                                          1 MetProProLysThrProArgLysThrAlaAlaThrAlaAlaAlaAlaAlaAlaAlaGluPro
                                                                                                                                                                                                                                                                                                                                                                                   41 AsplieuProLeuValArgLeuGluPheGluGluThrGluGluProAspPheThrAlaLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 CysGlnLysLeuLysIleProAspHisValArqGluArqAlaTrpLeuThrTrpGluLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           201 AlatysGlyGluValLeuGluMetGluAspAspLeuVallleSerPheGluLeuMetLeu
  Linear
                                                                                                                                                                                                                     2994
871
0
0
57
57
                                                                                                                                                                                                                                           Conservative:
Mismatches:
                                                                                       1 (bases 1 to 2994)
Antelman, D., Gregoryy, R.J. and Wills, K.N.
Retinoblastoma tusion polypeptides
Patent: US 6074850-A 3 13-Jun 2000;
 NC.
                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                     indels:
Sequence 3 from patent US 6074850.
                                                                                                                                                                                                                       Length:
                                                                                                                                                                                                                                                                                                   US-09-026-459A-49 (1-871) x AR098189 (1 2994)
                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                          /organism-"unknown"
. 618 c 593 q
                                                                                                                                        Location/Qualifiers
                               AR098189.1 GI:12807446
                                                                                                                                                                                                                               4447.50
93.86%
93.86%
                                                                                                                                                                                                                                                                  476.86
                                                                                                                                                    7667.
                                                                               Unclassified.
                                                                                                                                                                                                                                                      Best Local Similarity:
Query Match:
OB:
                                                                                                                                                                        974 a
                       AR098189
                                                         Unknown.
                                                                    Unknown.
                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                          Aliqument Scores:
                                                                                                                                                    source
          DEFINITION
                                                                  ORGANISM
                                                                                                                                                                                                                       Pred. No.:
                                                                                                                                                                        BASE COUNT
                     ACCESSION
                                                                                                                          JOURNAL.
                                                                                         REFERENCE
                                                                                                      AUTHORS
                                           KEYWORDS
                                                                                                                                      FEATURES
                                VERSION
                                                                                                                                                                                  ORIGIN
                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                            G
D
                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \overset{\circ}{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
```

1919 ILLING ILLIN	ਜ਼ੁਰ <u>·</u>	á d	Oy Pr	۸٥	 42	ò da · ·	Oy ad	λδ 	δο · ·	dd .	ò đ	Qy Db	oy.	ò đ	oy da	Oy Db	yo q	δγ Dip	dg d
CATCACTOR TATATA AND THE HITTITITITITITITITITITITITITITITITITITI	2				031	63	83	~ ~	23	ന ന	on on	383 1458	03	23	443	63	83	n3 81	23
	FILEFELLETETETETETETETETETETETETETETETETET	TOTAL MANAGEMENT AND STREAM OF TOGANGE AND CANDANCAGE AND STREAM OF TOGANGE AND CANDANCAGE AND STREAM OF THE AND STREAM		ARIC AAAAR AACTARAAAATIGATACAABAATTAFIGAAGFICTIGTGT	ATACCTTTTAT	ASBSerf.euGlyLeuValThrSerAsbGlyLeuProGlyValGlyAsbLeuSerfysAr 	!yrcloclollefyrlculysAsniysAsplcuAspalaarglcuhteLcuAspHisAs 	LysthricogiathraspscrileaspscrPheGluthrGlnargthrProArgiysSe 	ASn Leu Asp Glu Glu Val Asn Val I le Pro Pro HIST hr Pro Val Argthr Val Met As 	The fieding Internative to the mass serataser as poliner oser diameter the minimum of the mass of the minimum of the mass of the minimum of the mass o		[] CONTYTYTHOPHELYSGLULYSPHOALALYSALAVALGLYGLUGHYCH	HeClySerSladrgTyTLySLesClyValArgLosTyrTyrArgValMetCluSerMe 	LeulysSerGluGluGludrgleuSerTleGlnAsnPheSerLysLeuleuAsnAspAs 	IlePheffisMetSerLeuLeuAlacysAlaLeuGluValValMetAlaThrTyrSerAr 	SerthrSerGInAsnicuAspSerGIyThrAspLeuSerPheProTrp11eLeuAsnVa 	CUASIDICULYSATAPheAspPheTyrLysVall1cQluScrPheTleLysAlaGluG 	AshlouthrargclumoltlolysHisloughuargcyschuHisargtlomoltuse 	teaAtaTrpLeaSerAspScrPtoLeaPheAspLeatTeLysG1nSeriysAspArgG1

```
linear PAT De JUN 2002
                                                        1939 ACTGCAGCAGATATGTATCTTTCTCCTGTAAGATCTCCAAAGAAAAAGGGTTCAACTACG 1998
                                                                                                                                                                                                               2059 CCATTGAAATCTACCTCTCTTCACTCTTTATAAAAAGGGATAGCCTATCTC 2118
                                                                                                                                                                                                                                                                                            2119 GGGTAAATAGACTITGTGGAGGTGGTGTGGAGAGAGAGAATAGAAAAATAGATC 2178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2659 AOTTOTSASANSTTOCASAAATAAATAAATOSSAATOSSAATOSTAACSIAACSTGGGGGGGGGGGCGTCAAA 2718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1879 GGACCAACTGALCACTTAAATCTGCTTGTCTCTCAATCCTCCTCCCCCTG38
                                                                                                                                       2479 CCAATACTICACTATATACTATAAAGOOTINAAAAIITOOTACAATTAACAAAIITOOT 2538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2539 GGAGGGAACATTTATATTTFAFFFFGAAGAADOATAAAATTFFAGAAGTGTGCCA 2598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2719 AGANGEGEFGANGGANGCAN PERFERENCE TRADAMETRADAMETAN PETER TETRATERIA 2778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2839 CTGGGAAAAAGACTTCLACTGGAACAACAATGAAAAGGAGAAAATGAATGATGGTAGCATG 2898
                                                                                                                                                                                                                                                                                                                                                  624 TrpThrLeuPhcGlnHisThrLeuGlnAsnGluTyrGluLeuMetArgAspArgHisLeu 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            744 G!y6]yAsn Hefyr HeSerProLeatysSerFroTyrLys; HeSerGluClyLeabye 763
                                                                                                                                                                                             584 ProbeulysSerThrSerLeuSerLeuPheTyrLysLysValTyrArgLeuAlaTyrLeu 603
                                                                                                                                                                                                                                                                        604 ArgLeuAsnThrLeuCysGluArgLeuSerGluHisProGluLeuGluHisIlelle 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        664 PheLysIleIleValThrAlaTyrLysAspLeuProHisAlaValGlnGluThrFheLys 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              684 ArgValLeuIleLysGluGluGluTyrAspSerIleIleValPheTyrAsnSerValPhe 703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           704 MetGlnArgLeuLysThrAsnIleLeuGlnTyrAlaSerThrArgProProThrLeuSer 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       724 ProlleProHisIleProArgSerProTyrLysPheProSerSerProLeuArgIlePro 743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         764 ThrProThrLysMetThrProArgSerArgIleLouValSerIleGlyGluSerPheGly 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     844 LeuAlaGluMetThrSerThrArgThrArgMetGlnLysGlnLysMetAsnAspSerMet. 863
                                      544 ThralaalaaspMetTyrLeuSerProValargSerProLysLysLysClySerThrThr 563
                                                                                                                                                                                                                                                                                                                                                                                                                             644 AspGlnIleMetMetCysSerMetTyrGlyIleCysLysValLysAsnIleAspLeuLys 663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                804 ArgSetAlaGluGlySetAsnProProLysProLeutysLysLeuArgPheAsplieGlu 823
                                                                                                                  564 ArgValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAlaPheGlnThrGlnLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                 784 ThrSerGluLysPheGlnLysIleAsnGlnMetValCysAsnSerAspArgValLeuLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2994 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR207831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AK207831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                            qq
                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \tilde{\Omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                  \overset{\circ}{\circ}
                                                                                                                                                     김
                                                                                                                                                                                             ò
                                                                                                                                                                                                                               Ω
                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                  9.
                                                                                                                                                                                                                                                                                                                                                                                     d
                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ά
```

DNA

qq	444	FOIGUCETTGACTATETTATTAAAGTCTCACCTCCATGTTGCTGAAAGAAGAACATATAAA	æ Ç
ćδ	241	Thr	74 4
a	. 859	111 ACAGCIGITATACCATIAATGGITCACCI GAACIACAGGGGGGGGGGGGAGGI AGAAGI	918
οy	243		244
ag	919	GCACGGATAGCAAAACAACTAGAAAATGATACAAGAA11ATTGAAGTFCTGTAAAGAA	876
ŝ	243		144
qq	679	CATGAATGTAATATAGAGGTGAAAAATGTTALTTAAAAAATTTATATTTLATG	ε ξ □
λ'n (244	AshSerLeuGlyLeuValThrSerAshOlyLeuProGluValGluAshLeuSerLysAre	263
<u>ස</u> ි .	1039	AATTCTTGGACTTGTAACATCTAATGGACTTCCAGAGGTTGAAAATCTTTCTAAACGA	1098
ර් ස්	263	1970 1871 1872 1885 1988	283 1158
ογ	284	LysThrLeuGlnThrAspSerf1leAspSerFhecluThrGlnArqThrProAtqLysSer	¥ []
qu	1159		1218
ò	304	AsnLeuAspGluGluValAsnVallteProProHisThrProValArqThrVulMetAsn	323
q	1219	AACCTTGATGAAGAGGGAATGTAATTGGTGGACACACAGTTAGGAGTGTTAGGAAG	1278
да . ,	324	324 Thriled Indinieumetheleidsnisoralageraspoinfroserdinasniou 343 	343 1438
δλ	344	11eSerTyrPheAsnAsnCysThrValAsnProLysGluSerIleLeuLysArdValLys	363
. <u>a</u>	1339	TITTELLITTITTAACAACTGCACAGTGAATGCAAAAGAAAGTATACTAAACAAAGAAAG	1 498
. o _y	364	Asp11eGlyTyr1lePheLysGluLysPheAlaLysAlaValGlyGluGlyCluGlyCluGly	383
ପୁର	1399	GATATAGGATACATCTTTAAAGAGAAATTTGCTAAAAGCTGTGGGAVAGGTTGTGTGAA	1458
oy G	384 1459		403 1518
δ	404	LeuLysserGluGluGluArqLeuSer11eGluAsnPheSerLysLeuLeuAsnAspAsn	424
qu	1519		1578
ς	424	IlePheHisMotSorLouLeuAlaCysAluLeuGluValWalWalMetAlaThrTyrSorArg	444
QD	1579	ATTITCATALGEOTITATIGGGGGGGGGCTGTGGGGGGGGGGGGGGGGGGGGG	16.48
ογ	444	SerThr SerGInAsnicedAspSerGIyThr AspicedSerPheProTrp HelenasnVal	46.3
qq	1639	AGIACATCICAGAATCITGATICIGGAACAGAT11GICH LCCCAHOAAHCTGAALGIG	1648
Ś	464	LeuAsnLeuLysAlaPheAspPheTyrtysValIleG1uSerPheHetlysAlaG1u31y	4 x +
e e	1699	CTTAATTFAAAGCCTTGATTTTTACAAAGTGATGGAAAGTTTTATCAAAGTAGAAGG	1758
δ	484	AsnLeufhrArq@luMet HeLysHisLeu@luArq@ys@luHisArqHeMet@luSer	103
đ	1759	AACTTGACAAGAAAATGATAAAACATTTAGAACGATGTGAACALCGAATCATGGAALCC	1 11 18
οy.	504	LeuAlaTrpLeuSerAspSerProLeuPheAspLeuTtel.ysGTnSerTysAspArqClu 	523
<u>a</u>	1819	CTIGCAIGGCTCTCAGATTCACCTTTAITGAIC 11A11AAACAA1CAAGGACCGAGAA	1878
λo	524	GlyProThrAspHistonGluSerAlaCySProLonAsnLouProLoughtlis	54.4
qu	1879	GGACCAACTGATCACCTTGAATCTGCTTGTCCTCTTAATCTTCTTCTCTCTACAATAATCAC	

```
PAT 31 JAN 2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #11 - FELLE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1938 ACTGCAGARATATGTATCTTTCTCCGTAAGATCTCCCAAAGAAAAAAGGTTCAACTACG 1998
                                                                                                                                                                                                                                                                                                                                                                       - FILLITELLE FILLITELLE FELLE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2539 ACASCAAPAAAATGACTOPAAGATPAAGAATPTTAGTATOATTGGTGAATGATTPGGGG 2658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-59 OCALIGAAAPCIACCICTCTTTCACTGTTTTAAAAAAGTGTATGGGGTAGGCTATTT 2118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          144 Thi AbaAbaMet Tyri ouson by an Angson broi ysi ysi ysi 1564 156 min 1664
                                                                                                                                                                                                                                                                                         64 ArqValAsnSerThrAlaAsnAlaCluThrGlnAlaThrSerAlaPheGlnThrGlnLys 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           694 ArgicuAsnihri.cuCyscluArgienieuSerGluHisPreGlufeuGluHis (]elie 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5.24 ImplibricouphedInHisThrLeudInAshSInTyrClubenMetArgAspArgHisLeuf643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      end thetysiletleValihrAlafyrtysAspteuProHisAlaValGinGinThiPhetys 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ind ArqVarloulleLysGluGluGluTyrAspSerIleLleValPheTyrAsnSerValPhe 703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        194 Met GlaAraLeutlySTbrAsnTletzenGlsTyrAlaserTbrArgProPteTbt Deutser 1723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  744 GlyClyAsn1teTyrt1eSerProteulysSerProfyrtys1teSerCluClyteuPro 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           264 ThrProThrLysMetThrProArgSerArgIleLeuValSerIleGlyGluSerPheGly 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            184 Thr Ser GlulysPheGlnLysTleAsnGlnMetValCysAsnSerAspArgValLeuLys 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #14 GlySerAspGluAlaAspGlySerLysHiSLeuProGlyGluSerLysPheGlnGlnLys #43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       844 teualadluMetihrSerThrarqThrargMetGlnLysGlnLysMetasnAspSerMet 863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION Tissue specific expression of retinoblastoma protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lincar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2994 bp
                                                                              2839 SATACCTCAAACAAGGAGGAAA 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                854 AspihrSerAsnLysGluGluLys 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BD009728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \frac{2}{3}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -:-
```

```
FP 1C-FCV-19-00 CS CS_CTTT1 14-FEE-19-2 CS_S01002 PI
DOUGLES ANTELMAN, FICHARD IT GRESSPY, KENNETH N WILLS PC
CO Strandedness: Single:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GlnLysAsnileGluileSerValHisLysPhePheAsnLcuLeuLysGluileAspThr 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101 HedysilePheileAlaAlaValAspi.cuAspGluMetSerPheihrPheihrGlui.cu 12.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            141 SerThrLysValAspAsnAlaMet.SerArqLeuLeuLysLysTyrAspValLeuPheAla 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161 LeuPheSerLysheuCluArgThrCysClaEcuilcTyrtheuThrClnProSerSer 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         259 GACCIGCCICLOGICAGGCTTGAGITTGAAGAAACAGAAGAAGAACTGATTTTACTGCATTA 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21 ProAlaProProProProProProGluGluAspProGluGlaAspSerGlyProGlu 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41 AspleuProLeuValArgLeuGluPheGluGluThrGluGluProAspPheThrAlaLeu 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MetProProLysThrProArgLysThrAlaAlaThrAlaAlaAlaAlaAlaAlaGluPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 CysCloLysLeaLyslleProAspHisValArqGlaArqAlaTrpLeuThrTrpGlaLys
                                                                                                        Antolman,D., Gregovy,R.J. and Wills.K.N.
Tissue specific expression of retinoblastoma protein
Facett, Ji Löülbasa8-A 2 21-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                /ordanism-'Unidentified'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                   Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        indels:
                                                                                                                                                                                                                                                                                                                                                                                            /orqanism-"unidentified"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-00-026-459A-49 (1-971) x BD009729 (1-2994)
                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:32644"
618 c 593 q
                                                                                                                                                                                                   21-MAR-2001
13-NOV-1997 JP 1998522958
                                                                                                                                                                                                                                                                                                                             .2994
                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
BD009728
BD009728.1 GL:18638101
                                                                                                                                                                       Unidentified
Jp 2001502638-A/2
                                                                                                                                                                                                                                                                                                     Topology: Linear;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.936-310
                                                                                              (bases 1 to 2994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4447.50
93.863
93.868
                               JP 2001503638-A/2.
                                                                                                                                                                                                                                                                                                                                                                             .2994
                                                 unidentilied.
                                                                             unclassified.
                                                              unident, itied
                                                                                                                                                                                                                                                                                                                                  soarce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Perrent Similarity.
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                             974 a
                                                                                                                                                        CANJI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A.ignment Scores:
                                                                                                                                                                                                                                                                                  SSE EE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
ACCESSION
                                                                                            REFERENCE
                                                                                                           ATTHORS
                                                                                                                                           COLNAL
                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                FEATURES
                VERSION
                                                                                                                        TITLE
                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                           NIGIN
                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
dg
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ď.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΩÇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
```

Tue Jan 21 10:04:35 2003

<u> </u>	6.13	THEFT HELLER HELLER FOR A STATE OF THE HELLER HELT HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER	978
Š	1 н 1	HeserthrologiestheskaserAlaLeuCysValSerTrplieThrPheLeuLeu 20	002
2	673	ATATOTACTGAAATAAATTOTGGATTGGTGAAAAGTTTGTTGGATGACATTTTTATTA 73	38
5 £	zel 739	201 ATALYSGIYGTUVATLOUGINMOTGTUASPASPIOUVATHOSOTPIOGHILOUGING 220 	023
5	777	ėysVailzeuAsplyrPhellelysLeuSerProProMetlæuLysGlabrolyrLys 24	0 4
ŝ	799	THE CHITCH HITCH H	85.8
> 0	241	Flu	24.4
43	548	ACAGETGETATACCCATTAATEGETEEGAACACCCAGGCGAGGTCAGAACAGGAGT 91	9.18
5	147		₹ 4 3
1.1	515	GTACGGATAGCAAAACAAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAA 97	978
5	74 4		24.3
1. Tr	666	CALGAALGTAATATAGATGAGGTGAAAAATGTTTATTGAAAAATFTTATAGGTTTTATG 10	038
5	744	AsuswelendlyLeuValTutSerAsu6lyLwuProGluValGluAsuLeuSerLysArg 26	563
200	1049	AATICTEGAAATETTETAAAATETAAATEGAACTTEGAAAAATETTETAAACA 10	860
50	764	19tG1uG1u1tefyttautyssantysasptauaspalaargtauphetausphisasp 28 	83
Ē	1099	TAMBAAGAAATTTATOLIAAAAAIAAAGATOTAGATGCAAGATTATITITGGATCATGAT 11	1158
5 3	284	Lystkilloudinihi Aspsorii loAspsorphodiuthindinarqthiproArqlysSer 30 	503
	1	Acceptant Acceptant for all Acceptant for the process of the proce	1
5 =	1213		278
	124	the tracing intermet lician Ash Ser Aspoint 5 Ser Glubbulas 134	
Ą	1279	PHILLIPHITH HITTER STEEL THE THE HITTER HITTER HITTER HITTER THE AND A STATE CARLO AND A STATE SANDARD AND	3.38
15 20	144	HeserlyrPhoAshAsh2ysIhrValAshProLysGluSerHeleutysArqVallys 36 Helling Helling	893
<u> </u>	5.5 + -	ATTICCTATITTAACAACTIGCAGAGTGAATGCAAAAGAAAGTATACTGAAAAGAGTGAAG 13	348
<u> </u>	4.65	AspiledlyTyriiePhelysduitsSheAlaLysAlaValdlydludlydysValdiu 38 	
		WATER MONTH OF THE MANAGEMENT	£ 5
5 £	1459		518
:	\$ III \$	or the second of	
5 3	5151	TRAINESSETTING TO THE CHARLESSETTING TRAININGS FLYSIC OF CONTRAINESSE 42. FLITTING THE FLITTING THE FLITTING THE FLITTING THE CARACTER CARACTER TO CARACTER	578
5	4.24	llePheHisMetSerLeuLeuAlaCysAlaLeuGluValValMetAlaThrTyrSerArg 44	₹.
÷	15.79	ATTITITATATETTTTTTTTTTTTTTTTTTTTTTTTTTT	638
5 3	444	Serthriserthasnicuaspserttyrraspicuserthetrotrpileicuasnval 46 	66 %
7.0	464	tenAsntent.ysAlaPheAspPheTyrt.ysVallTeGluSerPhetTet.ysAlaGluGly 48	, æ
			,

```
1699 CHIAAHTIAAAAGCCHIIGAILTHIACAAAGIGAIGGAAGHIIHAIGAAAGAAAAGC 1758
                                                               1759 AACTIGACAAGAAAAIGAIAAAACATITAGAACGATGIGAACAICGAAICAIGGAATCC 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2539 GGAGGGAACATCTATATTTCACCCTGAAGAGTCCATATAAAATTTCAGAAGGTCTGCCA 2598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2659 ACTICTGAGAAGITCCAGAAAATAAATCAGATGGTATGTAACAGGGAGGGTGTGCTCAAA 2718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2719 AGAAGTGCTGAAGGAAGCAACCCTCCTAAACCACTGGAAAAAACTACGCTTTGATATTGAA 2778
                                                                                                                                                                                                                                                                                            564 ArgValAsnSerThrAlaAsnAlaGluThrGlnAlathnSerAlaPhettnThrdInLys 583
                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                          604 ArgLeuAsuThrLeuCysGluArgLeuLeuSerGluHisProGluLeuGluHisHleFle 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          624 TrpThrLeupheGlnHisThrLeuGlnAsnGluTyrGlnLeuMetArqAspArqHisLeu 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           644 AspOlnIloMetMetCysSorMetTyrGlyIloCystysValLycAstilcAstiandys 663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          664 PheLysIleIleValThrAlaTyrLysAspLeuProHisAlaValGluGluThrFheLys 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        744 GlyGlyAsnileTyrileSerProLeutysSerProLyrtysTleSerCluGlyLeutho 764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     764 ThrProThrLysMetThrProArgSerArg11eLeuValSerIleGlyGluSerPheGly 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ThrserGluLysPheGlnLysIleAsnGlnMetValCysAsnSerAspArqValLeuLys 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      804 ArgSerAlaGluGlySerAsnProProtysProLeuLySLysLeuArgPheAsplleGlu 823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     824 GlySerAspGluAlaAspGlySerTysHisTeaProAlyAluSerLysPhetHnGlnLys 843
                                                                                               504 LeuAlaTrpLeuSerAspSerProLeuPheAspLeuTleLysGlnSerLysAspArgGlu
                                                                                                                                                                                                                                                                                                                                                           584 ProLeuLysSerThrSerlouSerlouPhoTyrIysLysValTyrArqLouAlaTyrLou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            684 ArqValLeu1161.ysGluGluTyrAspSev11e11eVa1PheCyrAsnSevVa1Phe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            704 MetGlnArqLeuLysThrAsnileLeuGlnTyrAlaSerThrArqProFroThrLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       724 ProlleFroHislleFroArqSerFroTyrLysPheProSerSerProLeuArqllePro
                                                                                                                                                               524 ClyProThrAspHisLeucluSerAlaCysProLeuAshLeuFroLeucluAshAshHis
                                484 AsnLeuThrArqGluMetIleLysHisLenGluArqCysGluHisArqIleMetGluSer
                                                                                                                                                                                                                              544 ThrAlaAlaAspMetTyrLeuSerProValArqSerProLysLysClySetThrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     784
                                                                                                                                        Dp
                                                                                                                             qq
                                                                                                                                                                                              q
                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Op
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                               õ
                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \delta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q (1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
```

```
linear PAT 10-JUN-1998

    (bases 1 to 2994)
    Shepard H.Michael, and Wen, S.Fen.
    Characterization of a novel anti-pl10.sup.RB monoclonal antibody
Patent: US 5710255-A 2 20-JAN-1998;

                #44 LeuAlasluMetThrSerThrArqThrArqMetGlnLysGlnLysMetAsnAspSerMet 863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .59 GACCLG CICLOGERCAGGITIGAAGITIGAAGAAACAGAAACCIGAITITACIGCAITA 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81 ValSerSerValAspGlyValLeuGlyGlyTyrIleGlnLysLycLycGlnLeuTrpGly 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.1 HetysilePheileAlaAlaValAspLeuAspGluMetSerPheThrPheThrGluLeu 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (2) The ysasmicoluleSerValHisLysPhePheAsmLeuLeuLysGluileAspThr 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 () SAGAAAAAAAAAATGAAAATGAGTGGATAAATTGTTTAAGTTAGTAAAAAGAAATTGATACC 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    !41 SerThrLysValAspAspAlaMet.SerArgLeuLeuLysLysTyrAspValLeuPheAla 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        161 LeuPheserLysLeuGluArqThrCysGluLeuIleTyrLeuThrGlnProSerSer 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21 FroAlaProProProProProProGluGluAspProGluGlnAspSerGlyProGlu 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41 AspleubraleuValArgLeuGluPhedluGluThrGludluProAspPheThrAlaLeu 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6.1 @ysGln1ys1.cn1ys11cProAspHisValArgGluArgAlaTrp1cuThrTrpGlu1ys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                              DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches:
                                                                                                                                                                                           Sequence 2 trom patent US 5716255.
IB1465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      inde Ls.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                            2994 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             38-09:26 459A-49 (1-871) x I81465 (1-2994)
                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                             /organism-"unknown"
                                                                                       854 AspThrSerAsnLysGluGluLys 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     J 936-310
                                                                                                                                                                                                                              181465.1 GI:3209762
                                                                                                                                                                                                                                                                                                                                                                                                                                              61.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4447.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93.868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     93.868
                                                                                                                                                                                                                                                                                                                                                                                                              2994
                                                                                                                                                                                                                                                                                                       Unclassitied.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Host Loral Similarity:
Guery Match:
                                                                                                                                                                                                                                                                  Unknown.
                                                                                                                                                                                                                                                                                    Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity.
                                                                                                                                                                            181465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Aliqument Scores:
                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                    R.SANISM
                                                                                                                                                                                                                                                                                                                                                                         JUURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fred. No.:
                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                         ATTH RS
                                                                                                                                                                                                                                                   KLYW KLS
                                                                                                                                        RESULL 5
                                                                                                                                                                                                                                                                                                                                                                                           FEATORES
                                                                                                                                                                                                                              VERSTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                         81400
                                                                                                                                                                                                                                                                  E MILES
                                                                                                                                                                            7.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
```

```
979 CATGAATGTAAIAIAGATGAGGTGAAAAAIGITITAIITCAAAAAIIITATACCIIIIAIG 1038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1099 TACGAAGAAFITATCTTAAAAATAAAGATCTAGATGCAAGATTAFITFTFGGATGATGAT 1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            279 ACTATICGAAAATTAATGAIGAITTTAAATIGAGGAAGIGAIGAAGCTTIGAGAAAAIGIG 1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1339 ATTICCIATITIAACAACIGCACAGIGAATICCAAAAAGAAAGITATACTGAAAAGGAGIGAAG 1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1579 ATTTTTCATATGTCTTTATTGGCGTGCGTCTTTGAGGTTGTAATGGCCACATATAGCAGA 1638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   424 HethestsmetSertealedalaSysatatedStata ValMetalathrigitSerarg 442
                                    181 ileSerThrGlufleAsnSerAlaLeuValLeuIysValSerTrpfleThrPheLeuLeu 200
                                                         221 CysValleuAspTyrPhellelysLeuSerProProMetLeuLeuLeuLysClubroTyrLys 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           384 IleGlySerGlnArqTyrLysLeuGlyValArgLeuTyrTyrArqValMetGluSerMet 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       404 LeuLysSerGluGluGluArgLeuSerlleGlnAsnPheSerLysLeuLeuAsnAspAsn 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             444 SerThrSerGlnAsnLeuAspSerGlyThrAspLeuSerPheProTrpIleLeuAsnVai 463
                                                                                                              201 AlaLysGlyGluValLeuGlnMetGluAspAspLeuValIleStrPheGlnLeuMetLen 220
                                                                                                                                                                                                                                 799 TGTGTOGITGAGIAIIIIAIIAAACIGIGAAGIGGGAAGIIGGTGAAAGAAGAAGAAAAAAA 858
                                                                                                                                                                                                                                                                                                             859 ACAGCTGTTATAGGCATTBATGGTTCACTTCAACACGCGAGGGGAGGTCAGAAGAGGGG
                                                                                                                                                                                                                                                                                                                                                                                           919 GCACGGATAGCAAAACAACTAGAAATGATACAAGAFITATTGAAGTTCTCTGTAAAGAA 97B
619 CTCTTCAGGAAATIGGAAAGGACAIGIGAACIIAIATA11IGACAACCCAGCAGIIGG 678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    324 ThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAspGlnProSerGluAsnLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   344 HeSerTyrPheAsnAsnCysThrValAsnProLysGluSerHeLeuLysArqValLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                284 TysThi LeuGhillh AspScrilleAspScrilleAspScrilleGhargThifteAr40ys3er
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Clyser---
                                                                                                                                                                                                                                                                                                                                                    243 -----
                                                                                                                                                                                                                                                                      241 Three
                                                                                                                                                                                                                                                                                                                                                                                                                                243 ----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        40.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                           qq
                                                                                                                                                                                            0.7
                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ολ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                    òγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         οğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
```

<u>a</u>

```
724 ProlleProffislleProArqSerProTyrLysPheProSerSerProLeuArqIlePro 743 *
                                                                                                                                                                                                                                                                                                                                                                       HITTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               THE FELLIC FER THE FELLIC FER AND TANABARA GALLICA ACT TO FELLIC FELLIC FELLIC FER AND THE FELLIC FE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       644. ASPÜDLICMET METCYSSETMETTYTĞİYLI EÇYSLYSVALLIYSASDI I CASPUCULYS. 663.
1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 111
                                                                                                                                       1759 AACTIGACAAGAGAAALGALAAAAACATITAGAAGGATGTGAAGALGGAATGGAATGC 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2059 CCATTGAAATCTACCTCTCTTTCACTGTTTATAAAAAGTGTATCGGCTAGCCTATCTC 2118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2119 CGG TAAATACATHIGHIITHITHITHITHITHITHITHITHITHITHITHIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2179 TGGACCTTTCCAGCACACACCCGCAGAAATGAACTCATGAGAGATCATGAACAGACATTTG 2238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2459 GEGETTEGAT/AAAGAGAGAGTATGATCTATATATAGTATCTATAAAACTGGGTCTTC 2418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2419 AFGCAGAGACTGAAAAAAAATATTTGCAGTATGCTTCCACCAGGCCCCTAGCTTGTCA 2478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2539 GGAGGGAACATCTATATTTCACCCTGAAGAGTCCATATAAAATTTCAGAAGGTCTGCCA 2598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2779 GGATCWATGAAGGAATGGAAGTAAACATCTCCCAGGAGAGTCCAAATTCAGGAGAAA 2838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2599 ACACCAACAAAAATGACTCCAAGATCAAAGATCTTAGTATCAATTGGTGAATCATTCGGG 2658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.24 CHYPTOThr AspHistonGluSer AlaCysProteuAshLenProteuGlnAshAshHis 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               544 ThrAlaAlaAspMetTyrLeuSerProValArqSerProJystystysGlySerThrThr 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       584 ProteotysSerthrSertenSertauPheryrtysSysal?yrarqfcualafyrt.cu 603
484 AsubeuthrArqiluMetiletysHisLeusluArqCysCluHisArqIleMetGluSer 503
                                                                                                                                                                                                                                                                                       504 LeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysGluSerLysAspArgGlu 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       564 ArqValAsuSerThrAlaAsuAlaGluThrGlnAlaThrSerAlaPheClnThrGlnLys 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               604 ArgleuAsnThrleuCyschuArgleuLeuSerGluHisProGluLeuGluHisIleIle 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               624 TrpThrLeuPhedluHisThrLeuGlnAsnGluTyrGluLeuMetArqAspArqHisLeu 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               664 PhetysileileValThrAlaTyrLysAspLeuProHisAlaValGlnGluThrPheLys 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               684 ArqValLeulleLyschuchurhurkAspserlielieValPheTyrAsnserValPhe 703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               704 MetGluArglout/ys/brAsnilletenGlutyrAlaSerThrArgPrePreTirtLeuSer 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       744 GlydlyAsulleTyrlleSerProLeuLysSerProTyrLyslleSerGluGlyLeuPro 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               754 IhrProthit;SMetthProArgSerArgHeLeuValSerHeGTyGluSerPheGTy 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       784 ThrestelotyephedinfystleAsuGluMetValCysAsuSerAspArqValLeuLys 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               804 AruserAladludlyserAssProProtysProteutystysteuArgPheAspiledlu 823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               844 OlyserAspolualaaspolyserLysHisLouProGlyGluserLysPheGluGluLys 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>...</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       \frac{2}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \frac{\hat{\Xi}}{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>ئ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ÷:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ξ
```

```
Attains lation - MEPK IPRKIAALAAAAAAEPPAEPPEPPEEDPEOPEGPSGFEDLIN.
FILANDERE ELEMENTA FILONDERAMLINEN SSEVENJÄRT FORKKELMÄTE
FILANDERSE PELOKKULESVHKEPMLIKETOISIKVINAMERLIKKYDVILFA
LESKLERTGELIYLTOPSSSISIEINNALVIKVSMITHILAKREDOLUSFOL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MLOVLDY FIRLSPPMLLKEPYKTAV I PINGSPRTPRROGNRSAR I AKOLENDTR I I EV
LOKEHEGNI DEVKNYYFKNE I PFMNSLGLVTSNGLPEVENLSKRY FE I YLKNKDLJAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RLYYRVMESMLKSEEERLSTONESKLLINDNTEHMSLLACALEVVMATYSKSTSONLLIS
GTDLSFFWLLNVLNLKAFDEYKVTESETKAEGNLFKEMTKHLEKCEHRTMESLAMLSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LEQHTIQNEY FLIMRORHT DOTHMI SMYGTCKVKNITHKE KLIVTAVNDLPHAVQETEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LELDHOK 11,QTDS10SFETQRTPRKSNLDEEVNV1PPH1PVRTVMNT1QQLMM11,NSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SDQPSENLLSYFNNCTVNPKESTLKRVKDTGYTFKEKFAKAVGQG3VETGSQRYKLGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SPLFOLIKOSKDREGPTDHLESACPLNLPIQNNHTAADMYI SPVESPKKGSTTRVNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RVLITKEEEYDSTIVEYNSVEMÖRLKTNILQYASTRPPTLSPTPHIPRSPYKEPSSDLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PGGNIY ISPLKSPYK ISEGLETETAM PRSKILIVS I GESFOTSERFOR I NOMVCNSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RVLKRSAEGSNPPKPLKKLKFD1EGSDEADGSKHLPGESKPQQKLAEMTSTRTRMQKQ
                                                                                                                                                          PRT 12 JUL 1995
                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 2994)
Lee,W.H., Shew.J.Y., Hong.F.D., Serry.L.W., Detroso.L.A., Young.L.L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TANAETQATSAFQTQKPLKSTSLFYKKVYRLAYLRLNTLCERLLSEHPELEHTIWT
                                                                                                                                                                                                                                                                                                                                Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi,
                                                                                                                                                                             Human retinoblastoma susceptibility protein mRNA, complete ods
M28419
                                                                                                                                                                                                                                                     refinoblastoma profein; refinoblastoma susceptibility profein.
Homo sapiens refinoblastoma cDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /wap-"Xp22.32;Yp11.3"
/cell_line="retinoblastoma cell line Y79, and normal
                                                                                                                                                                                                                                                                                                                                                     Mammalia: Butheria: Primates: Catairhini; Hominidae: Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                        The retinoblastoma susceptibility quie encodes a nuclear phosphorotein associated with DNA binding activity phosphorotein 429 (6140), 642-645 (1987) 88014238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Znote="retinoblastoma suceptibility protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
Mismatches:
                                                                                                                                                          EKNA
NA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            retinoblastoma cell line"
/tissuc_type="retinoblastoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xret="GDB:G00 120-184"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /protein_id-"AAA69808.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism-"Homo sapiens"
/db_xref-"taxon:9606"
                                                                                                                                                     44 VY47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xre1-"G1:190963"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                593.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                             2899 GATACCTCAAACAAGGAAGAGAAA 2922
864 AspThrSerAsnLysGluGluLys 871
                                                                                                                                                                                                                                                                                                                                                                                                                                   Bookstein, R. and Lee, E. Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KMNDSMDTSNKEHK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zeodon_start :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /dene-"MIC2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              139. .2925
/gene="MTC2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.936-410
                                                                                                                                                                                                                             GI:190962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4447.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             93,86%
93,86%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98.928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7887
                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                                           M28419.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          974
                                                                                                                                                     HUMRRSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3657987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                        CHGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOHRNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dene
                                                                                                  RESULT 6
                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                          HUMKHSA
                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1
  Š
```

US-09-026-459A-49 (1-871) x HUMRBSA (1-2994)

Oy Db	304	ASILCUASPGIUGIUVAIASNVAIHTEPTOPTOHISTBA PTOVAIATRYTHYVAIMETASI 	123
du du	324	ThrileGinGinLeuMetimetileLeuAsnSerAlaSerAspGinProSerGluAsni.eu 	143
, oy	344	IloSerTyrFheAsnAsnCysThrValAsnFroLysGluSerThvLvuLysArqValLys 	363 1498
0y 1 Db	364	ASPTERCTYTYTTEPPETTSPLICEPPETTSPLECTSALGVALGLYGINGTYCYSVALGLU 	383
, ; g ₀	384 1459	llediyserdinakqTyrLysLeuglyValaraLeuTyrTyrakgValMerGluserMer 	403
60. GB	404	LoutysSerdludludluArgteuSerIledluAsnEheGerLysteuteuAsnAspAsn 	423
Oy Db	424		443 1638
Qy	444	SerThrSerGlnAsnLeuAspSerGlyThrAspLeu3erPheProTrpIleLeuAsuVal	46.3
Db			16.98
Oy Dp	464	LeuAsnicoliysalaPheAspPheTyriysValiledluserPheIlelysAladiudly [] [] [] [] [] [] [] [] [] [] [] [] []	483 1758
Qy	484	AsnLeuthrargGlumet HebyshisLeuGluargCysGluHisargHemetGluSer	503
Db			1818
0 y	504	LeuAlatrpLeuSetAspSerProLeuPheAspLeufleLysGlüStrLyuAspAradlu	%.∠3
	1819	[187e
9.	524	GlyProThrAspHisLeuGlüSerAlaGysProLeuAshLeuProJeuGlüAshAnHis	543
Ob	1879		1938
QY	544	ThralaalaaspwerTytteuSerProValArgSerProLysLysLysClySerThrib	563
Db	1939		1998
QV	564	ArqValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAlaPheGlnThrGlnLys [11] [1] [1] [1] [1] [1] [1] [1] [1] [1	583
Db	1999		2058
QQ	584	Profestlyscorthroad assorterPhotyrichychyllyrargleutiaTyrles	6.3
QQ	2059		2118
OY	604	ArgleuAshthrieuCysGluArqleuleuSerGluHisProGluLeuGluHis Helle	6.23
Eb	2119		2178
Q Q	624	TrpThrLeupheGluHisThrLeuGlnAsnGluTyrGluLeuMetArgAspArgHisLeu	643
	2179	{	2238
o,	544	ASPGIDILEMET.CYSSPFMetTyrGlyILECyGLysValLysAsbIlGASPLeuLys	663
p	2239		2298
Οy	664	Phetystleile valThrAlaTyrLysAspteuProHisAlaValGlnGluThrPhetrys	683

```
PRI 12-JUL-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Draft entry and computer-readable copy of sequence for [1] kindly provided by S.H.Friend, 10-FEB-1988.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryoja, Metazoa: Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria: Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 4600)
Friend,S.H., Horowitz,J.M., Gerber,M.R., Wang,X.F., Bogenmann,E.,
2419 ATGCAGAGACTGAAAACAAATATTTGCAGTAGCATCCAGGCCCCAACCAGACACATGCA
                                                                                                                                                                                               25.39 GGAGGAACATCTATATTCACCCCGGAAGGCCCATAAAATTTCAGAAGGTCGCA 2598
                                                                                                                                                                                                                                                                                                                                                                              2999 ACACCAACAAAAATGACTCCAAGATCAAAAATCTTAGTATCAATTGGTGAATCGGGG 2658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2719 AGAAGGCIGAAGGAAGGAAGCCICCFAAACCAGGAAAAAGCAGGCTTTGATATTGAA 2778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2779 GGATCAGATGAAGCAGATGGAAGTAAACATCTCCCAGGAGAGTCCAAAATTTCAGCAGAAA 2838
                                                                                                                                                                                                                                                                                                                                            264 Thr ProThrigsMet Thr ProArgSer ArgilleLeuval Ser i LeClyCluSerPheCly 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 824 GlySerAspCluAlaAspClySerLysHisLouProClyCluSerLysPhcGlnGlnLys 843
                                                                                                                           704 Met Glu Arque U.ysthr Asnileteu Sintyr Ala Ser thr Atgure Phri. cu Ser 723
                                                                                                                                                                                                                                                                       244 GlyGlyAsnIleTyrIleSerProLeuLysSerProTyrLysIleSerGluGlyLeuPro 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          804 ArqSerAlaGluGlySerAsnProProLysProLeuLysLysLeuArgPheAspileGlu 823
                                                     684 ArqValLeuHeUSSG1uGluGluGluTyrAspSerHeHeValPheTyrAsnSerValPhe 703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Deletions of a DNA sequence in retinoblastomas and mesenchymal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tumors: organization of the sequence and its encoded protein
from Natl. Acad. Sci. U.S.A. 84 (24), 9659-9663 (1987)
88097427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human relinoblastoma associated (RBI) mRNA, complete cds. M33647 J02994
                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (clone: p4.7R) cDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .4600
/organism~"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone-"p4.7R"
/cell_type-"retinoblast"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4600 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db xrot="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2899 CATACCTCAAACAACCAAGAGAAA 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             864 AspThrSerAsnLysGluGluLys 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Li, F. P. and Weimberg, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /map="13q14.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          retinoblastoma protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /qener"kbl"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G1:190945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .4600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HUMREA I RA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         M33647.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3480530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sollos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HUMRBALRA
Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOHN KNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     divide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                       S
                                                                                                                         5
                                                                                                                                                         â
                                                                                                                                                                                                 5
                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                        \stackrel{>}{\circ}
                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
```

```
VILLEBERT EEPDETALCOKLKI PERI AATAAAAAREPTATOPPEEDITGUSCHEDIJGUSCHEDIJGUSCHEDIJGUSCHEDIJGUSCHEDIJGUSCHEDIJGUSCHEDIJGUSCHESTERELOKNI EESTAVULGUSCHESTETELJKKI EET SVERFENLILKELDISTIKKI VINAMASKELKKYTOVLFA LESKLEEKTELI YETOPSSESI STETENAALVLKK VSWITTELLAKGEVLOMEDIJLY ISTOLI MICVLUYFI KLISPPMIJINELYKI AAV 101 NOSINETPRIKOONKSKRI ARQUIENDIJKI TITTU LICKEHECNI DEVKNIVYEKNET PEMINSIALI VISKOLI LOKKEHECNI DEVKNIVYEKNET PEMINSIALI VSINGLI PEVENILI SKRYBEL YLLKIKOLI DAR
                                                                                                                                                                                                                                                                                 LELDHDKTLGTDSTDSFETORTPRKSNLDEEVNVTPPPPPVRTVONTTOOLMMTINSA
SDQPSENLLSYFNNCTVNPRESTLRPVRTGYTFKERFARAVGGGGGGGGGGGGGGGGG
                                                                                                                                                                                                                                                                                                                         PLYYFVMESMLKSEEEPLSTQNFSKLLNINTFHMSLLAJALEVVMATYSKSTSQNLDS
GTDLSFPWTLNVLNLKAFDFYKVTESFTKAEGNLTREMIKHILERCEHRIMESLAMLSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPGGNIYISPLKSPYKISEGLPLPIKMIPKSKILVSIGESPGTSEKPQKINOMYGNSD
PVIKPSAFGSNPPRPLKKLRPDIEGSPEALGSKIILPGESKPYGKLAEMTSTRTPMOKY
KMNDSMDISNKEEK"
                                                                                                                                                                                                                                                                                                                                                                    SPLFDLTKOSKDRIGGPTDHLESAGPLILIFLÖNNHTAADMYLGPVKSDKKGSTTRVNS
TANAETOATSAPÖTÖKPLKSTSLSLFYKKVYRLAYLINITGERLLGEHFILEHTTWT
                                                                                                                                                                                                                                                                                                                                                                                                             LEGETI, GNEY ELMKUEHT DA, I MMCSMYG, CENVAN DE GAEN I TVTAYKDA, PHAVOETEK
RVL I KEEEEYDS I I VEYNSVEMORLKTINI LOQYASTRPPTI, SPIPBI PRESPYKPESSPLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ~ ~
~ 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
8 <del>1</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₹0 ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 ClntysAsniloGluiloSerValHistysPhePheAsnieutysGluiloAspThr 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  141 SerThrLysValAspAsnAlaMet.SerArgleuLeuLysLysTyrAspValLeuPheAla 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     161 LeuPheserLysLeuGluArqThrCysGluLeuIleTyrLeuThrGluProSerSerSer 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 CysClnLysLeuLysLeProAspHisValArqCluArqAlaTrpLeuThrTrpthuLys 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 McthrofigsthifficArglysthralaAlathaAlaAlaAlaAlaAlaGlunto 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41 AspieuProleuValArqLeuGluPheGluGluThrGluGluProAspPheThnAlaLeu 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101 IleCysIlePheIleAlaAlaValAspLeuAspGluMetSerPheThrPheThrGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21 ProAlaProProProProProProGluGluAspProGluGlnAspSerClyProGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        364 CAGAAAAACATAGAAATCAGTGTCCATAAATTCTTTAACTTACTAAAAGAAATTGATAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note-"retinoblastoma associated protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0 0 2 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       815 q 1454 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches:
                                                                                                                                /db_xref-"GDB:G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   [nde]s:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-026-459A-49 (1-871) x HUMRBA1RA (1-4600)
                                                                                     /protein_id-"AAA69806.1"
                                                                                                       /db_xref-"GI:190946"
                                                                   /codon_start.-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5.31e - 310
                      /gene-"kBl"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4447.50
93.868
93.868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         842 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98.928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1489 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Aliquaent Scores.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ^{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    υþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
```

2 G	181	LeSerThrGluffeAsnScrAtaleuValLeufysValSerTrpHeThrPhcLeuLeu 	200	
45 20 20	201	. AlalyssiysiuVallousinmotsiuAspAspLouValilosorPhosinLouMetLou 	220	
6 Hg	221	CgGV11.0-ASPGyrPhallalysLauSarProProMotLauLacLysGluBroTyrFtys 	240	
17	24.1	111111		
q G	724	ACACCTETTATACCCATTAATGGTTCACCTGGAACAGGCAGGCGAGGTCAGAACAGGA	an .	
> 5 3	243			
a >	184	GCACCGATACCAAAACTAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAA	843 243	
- 4 <u>0</u>	9 9 8	CATGAATGTAATATAGATGAGGGGAAAAATGTTTATTTCAAAAATTTTAIACCTTTTA	0	
e e	244 90 4	AsiiSetteuctytenValThrSerAsnolyteuProGluValGluAsnieuSertysArg 	263 963	
9. 10.5	264	TyrilicileTyrLeuLysAssLysAspLouAspAlaArgLeuPhcLeuAspH18Asp 	283 1023	
5 G	284	LysThrLeuGluThrAspSerTleAspSerPheGluThrGluArqThrProArqLysSer	303 1083	
ර් සි	404 1084	ASILICUAS PGIUGIUVA IASINVAIII GPTOPTOHIS THT PTOVA IATGTHT VAI MELASIN 	323 1143	
술 윤	1144	ThriledingInLeuMetMetIleLeuAsnSerAlaSerAspGinProSerGluAsnLeu 	343 1203	
0.y 0.b	344 3204	InsertyrPheAsnAsnCysThrValAsnProLysGluSerIleLeuLysArgValLys 	363 1253	
55 159 159	364 1264	ASPIROCIFTTTIOPHOLYSCIULYSPECALSLYSALSVALCIYCINCLYCYSVALGIU 	383 1 ¹ 23	
9.5 10.5	. 1824	LediySerGinArqTyrLysLeuGiyValArqLeuTyrTyrArgValMetGiuSerMet 	403 1383`	
5 cy	404	LeuLysSerGluGluGluArgLeuSerIleGlnAsnPheSerLysLeuLeuAsnAspAsn 	423 1443	
oy Db	424	Concent sweetSert.cout.cout.cout.act.cout.cout.cout.cout.cout.cout.cout.co	443 1503	
ás da	444	SerThrserGlnAsnLeuAspSerGlyThrAspLeuSerPheProTrpIleLeuAsnVal 	463 1563	
5 G	464 1564	PenAshlenLysAlaPheAspPheTyrLysValIleGluSerPheIleLysAlaGluGly 	483 1523	
5	4.84	Asn.culhrargCluMctllclysHisLcuCluArgCysCluHisArglleMctGluSer	503	

```
1684 CHIGCAIGGCHCHCAGATHCACCTTTAITHGAICHTHAAGAATGAAAGGAGGGGGAA 1743
                                                                                                                                                             2104 GACCAAATTATGATGTGTTCCATGTATGGCATATGCAAAGTGAAGAATATAGACTTAAA 2163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2284 ATGCAGAGACTGAAAACAAATATTTTGCAGTATGCTTCCACCAGGCCCCCTACCTTGTCA 2343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysGlnSerLysAspArgGlu 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 664 PheLysIlelleValThrAlaTyrLysAspLeuProHisAlaValGlnGluThrPheLys 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2524 ACTITCTGAGAAGTTCCAGAAAATAAALCAGAIGCIAIGTAAGAGGGAGGGTGTGTGTAAA 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            844 LeualaglumetThrSerfhrargThrargMetGlnLysGlnLysMetAshaspSerMet 863
                                                                                                      524 ClyproThrAspHisLedCluSetAlaCysTroLeuAshLeaFroheuGhAshAshAis
                                                                                                                                                                                                                       564 ArgValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAlaFheGlnThrGlnLys
                                                                                                                                                                                                                                      584 ProLoulysSerThrSerLeuSerLeuTheTyrLysLysValTyrArgLeuAlaTyrLeu
                                                                                                                                                                                                                                                                                                                                                                                                624 TrpThrLeuPheGlnHisThrLeuGlnAsnGluTyrGluLeuMetArgAspArgHisLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                       644 AspGInfleMetMetCysSerMetTyrGlyfleCystysValLysAsnfleAspLeutys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2164 TTCAAAATCATGGAAGGGATACAAGGATCTTCCTCATGGTGTTCAGGAGACATTCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        684 ArgValLeuTleLysGluGluGluTyrAspSerIleIleValPheTyrAsnSerValPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       704 MetGlnArgLeuLysThrAsnlleLeuGlnTyrAlaSerThrArgProPreThrLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  784 ThrSerGluLysPheGlnLys1leAsnGlnMetValCysAsnSerAspArgValleuLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    824 GlySerAspGluAlaAspGlySerLysHisLouProGlyGluSerLysPhcGlnGlnLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              504
                                                                                                                                                                                                                                                                                                         Cb
                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       dd
                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                        δλ
                                                                                                                                                                                                                                                                                                                                                                                                ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q\underline{\mathbf{y}}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ
```

		_	
	AspthrserAsutyschushurys	qc	618 CTC
Db 2764		χ̈́	181 116
RESULT B		ब त	678
Todats DEFINITION		70	207
ACCESSION	AX (1070)	OC	7.38
VERSION KEYWORDS	AX 5 (0 / 0 I : 1 / 0 I : 1 / 0 / 0 / 0	5	51 61
SOURTE		· ;	
	bonio sapiens Wakaryota, Metazoa, Chordata, Craniata, Vertebrata, E		ρ ,
SFERENCE			747
AUTHORS	Young, P.E., Aupustus, M., Carter, K.C., Ebner, R., Endress, G., Horrigan, S., Soppet, D.R. and Weaver, Z.	qr —	858
HILE	Cancer gene determination and therapeutic screening using signature	ç,	243
JULIKNAL	grori sees Tatent: Wo ol94629-A 1210 13 DEC 2001;	qri	918
FEATURES	Avalon Pharmaceuticais (US) Location/gualitiers	, 	243
20 Itog			27.2
	/db_xref="taxon:9606"	-	
MASE COUNTY	2.44	cy.	244
Alianment	5.5.4	qq.	1038
Pred No.	5,69e-310 Eeugth:	νο.	264
STORY S	93.868 Conservative:	: :	1098
est Loca very Mai		cò	284
 	6 Gaps:	<u> </u>	11.00
05 09 026	459A 49 (1-871) x AX330701 (1-4839)		
9.7		λ -	*O*
(a) 148		ଜ୍ ପ	1218
07 21	ProAlaProProProProProProGluGluAspProGluGlnAspSerGlyProGlu 40	δō	324
_	COORTO CONTRACTO CONTRACTOR CONTR	વલ	1278
	NICO CONTRACTOR CONTRA	ογ	344
4 7	Assistant for the first first of the first two first for the forestyle first taken for some first for the first first for the first form of the first form o	qu	1338
ı		ζO	364
	(\partial \partial	QIQ	1398
135 41H	TGTCAGAAATTAAAGATACCAGATCATGTCAGAGAGAGAG		ď
υ <u>γ</u> 81	ValserserValAspd1yVallendiyülyİyrilediniysiysiysiysigejriggiy 160) () 4
(A) 47.8		a c	1458
101 70	11+ 11+ ys11+ Ph=Thr61uLeu	ζÓ	404
ND 4 4 8	APP 02 A FOLD BY FOR A QUARTER FOR THE FORM OF THE FORM TO THE FOR	qu	1518
	(i) in (veAco I) in () bit in SureVal Hiller veDhaDhaAcot and and veC) in 1 a Acot the	Qy	424
Db 438	CANAAAA YAANAAA CANGCATAAAAA TETTTAA CITAA CAAAAAAA TAAAAAAA CAAAAAAAAAA	q _Q	1578
	Sertly (1980a Aspasha AMet Serat of control est we fer a serve 1990a 3	ςò	444
		qu	1638
		5	464

```
IGAATGIAATATAGAIGAGGIGAAAAAIGIIIATII@AAAAAIIIIA:A@IIIIAIG 1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTIGATGAAGAGGTGAATGTAATTCCTCCACACTCCAGTTAGGACTGTTATGAAC 1277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPCCTATITIAACAACTGCACAGTGAATGCAAAAGTATACTGAAAATAGTGAAGTTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PACATC1CAGAA1C11GA1TC1GGAACAGA111G1C111111CCCA10GA11C11CAGA1C11G 1697
                                                                                                                                                                            () 7.7
                                                                                                                                                                                                                                                          MGCTGTTATACCCATTAATGGTTCACCTCGAACACCGAGGTGAGGAACAGGAGT 917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCCATACCAAAACTACAAAATGATACAAGATTATTGAAGTTCTCTCTGTAAAGAA 977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aSertieuGlytieuValithrSerAsnGlytienProGluValGluAsntieuSertiysArg 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         £7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     edlySerdinArgfyrlysLeudlyValArgLeufyrfyrArgValMetGluSerMet 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LLysSerGluGluArqLeuSerIleGluAsuPheSerLysLeuLeuAsuAspAsn 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PheHisMetSorLeuLouAlaCysAlaLeuGluValValMetAlaThrlyrSerArg 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #ThrSerGinAsnLeuAspSerGlyThrAspt.euSerPheProftpHeTeuAshVal 46.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        464 LeuAsnLeuLysAlaPheAspPheTyrLysVallleGluSerPhelleLysAlaGluGly 483
                                                                                                        eSerThrGlulleAsnSerAlaLeuValLeuLysValSerInpllelhrPheteuLeu
PheSertysLeuGluArdThr@ysGluLeuIleTyrLeuThrGluProSerSer 180
                                                                                                                                                                          atyselyelavalla actometeluAspAspla avallitese ribestinaameteeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rileGinGinLeuMetMetileLeuAsnSerAlaSerAspGinProSerGiuAsnLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 eSerTyrPheAsnAsnCysThrValAsnFroLysGluSerIleLeutysArqValLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SThrLeuGlnThrAspSerIleAspSerPheGluThrGlnArqThrProArqLysSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nLeuAspGluGluValAsnVal1LeProProHisthrProValArg1hrValMetAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----GlySer-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ć
```

1757 503 1817 523 1877 1937	563 583 2057 503 2117 2117 623 3	2237 6663 2297 683 2357 703 2417 723	743 763 763 783 2597 783 2657 803 2717 823 823
IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	ThralanlaAspMetTyrLeuSerProValArqSerProLysLysClysclyScrThrThralanlaAspMetTyrLeuSerProValArqSerProLysLysClysclyScrThrThralanlanlanlanlanlanlanlanlanlanlanlanlan		ProfileProfileIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
T - T - T - T - T	2058 - 2058 - 22058 -	2238 2238 2238 2238 2238 2338 2338 2338	24 7 2 2 2 2 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
3 3 2 3 3 3 5 2) 3	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8 8 8 8 8 8 8 8 8 8

```
Hogg, A., Ria, B., Onadim, Z. and Cowell, T.K.
Molecular mechanisms of oncogenic mutations in tumors from patients
with bilateral and unilateral retunoblastoma
Proc., Natl. Acad. Sci. 0.3.A. 90 (15), 7351-7355 (1993)
                                                                                                                                                                                                                                                                           PRI 05 MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Krafyke, B'A , Offerson, G'A , Hogg.A., Covon, A.B., Geradts, J., Cowell, J.K. and Kaye, F.J. .

Cowell, J.K. and Kaye, F.J. .

Partial fractization of the BB product in a family with incomplete practicance of familial relineblashome and benign relinal tumors on separate 9 (5), 1321-1326 (1994)

94203660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Onadim,Z., Hogq,A. and Cowell,J.K.
Mechanishs of oncogenesis in patients with familial retinoblastoma
Br. J. Cancer 68 (5), 958-964 (1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       McGCL,T.E., Yandell,D.W. and Dryja,I.P.
Structure and partial genomic sequence of the human retinoblastoma
                                                                                                                                                                                                                                                                                         Homo sapions retineblastems susceptibility protein (RRI) mENA and mutations.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryola; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Onedim, Z., Hogg, A., Baird, P.N. and Cowell, J.K. Onederic E., Hogg, A., Baird, P.N. and Cowell, J.K. Oneoqueic Foint stations in exon. 25 of the EBI gene in tamilies showing incomplete penetrance and mild expression of the retinoblastoma phenetrape Proc. Natl. Acad. Sci. U.S.A. 89 (13), 6177-6181 (1992)
                                                                     2838 FTGGFASAAATSAYTTOTACTOVAACACAAAAGCAGAAAAATGAATGATG 2897
Hogy A., Onadim,Z., Haird,P.N. and Dowell,J.K.
Detection of heterozygous mutations in the RBI gene in relinoblastoma parients using single-strand conformation polymerphism analysis and polymerase whate reaction sequencing oncogene 7 (7), 1445-1451 (1992)
                                             844 LeuAlaGluMetThrSerThrArqThrArqMetGlnLysGlnLysMetAsnAspSerMet 863
                                                                                                                                                                                                                                                                                                                                                                                      retinoblastoma protein; retinoblastoma susceptibility.
                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mutation data provided by Dr. B.L.Gallie, Hospital for Sick Children
                                                                                                                                                                                                                                                                             HKNA
                                                                                                                                                                                                                                                                      4839 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           susceptibility gene
Gene 80 (1), 119-128 (1989)
90006771
                                                                                                                                                                                2898 GATACCTCANACAAGGAAGGAAA 2921
                                                                                                                                   864 AspThrSerAsnLysGluGluLys 871
                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens cDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                         L41870
L41870.1 GI:793994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Toronto ONT W5G 1X8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ph: 416 813-5868
FAX: 416 813-4989
                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (sites)
                                                                                                                                                                                                                                                                      HUMRB1 MRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         555 Univ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94031584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93348271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2701949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1352398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1352883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8217609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8152792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Canada
                                                                                                                                                                                                                                                                                            PEFFINITION
                                                                                                                                                                                                                                                   HUMRB1 MRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MUDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ALLEHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOTTENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TILLE
                                                                                                                                                                                                                                                                         SOCOS
```

```
VRLEPEFFFFFPDDFTALONKER IPDBIVDEPAMI TWEKVSSVT«VDAARTÖFKKELUM)
LETAAVOLOFMSFTFFFLAKEN FESVBEKFENLIAKETDISTKVDNAMSKLIAKKYDVLFA
LESKI FRYCET IYLTÓPSSSTSTETINSALVLKVSWITFILAKGEVLOMEDDLVISFOL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RLYYRVMESMLKSEEERLSTUNESKLIINON FHMSLLACALEVVMATYSKSTSONLÖS
GTOLSFPWTLINVLNIKAFDFYRVTESFTKAFGNLTREMTREECEHRIMESLAWLSD
SPLEDLIKGSKLAFOFFDHIESSAFFINILFLONNHTAADMYLSPVRSDKKKGSTTRANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               I POGOTI Y LSPITKSPOL PTPTKMTPPSPTI VSTGESPOTSEKPYK I NOMVONSD
PVLKKSARGSONPPKPI KKI PPTI POSPRANGSKHU POBSKFOORLARMISTPTHMOKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Znote="Town tos16 unilateral metation causing a tentation
wrong splice; 600-118-734"
/citation=[5]
                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xret="GD#:200-118-734"
/translation="MPPKTPRKIAALAAAAAABPPPPPPPPPPEGDPEGDPDLPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LCARROCK TO CONTAIN YEART FERWINGLY IS NOTABOVEN IS KRYBELTATAKKOLIJAR.
FELDHORTIG FOST DSFEEDRIPRKSOLIDEEVIN FERFINVITOVRIVANITIGOLIMITINSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LECHTLONEYELMEDPHLDGTMMCSMYGTOKVKNIDLKEKTTVTAYKDIPHAVQETEK
PVLIKEEEYDSTIVEYNSVEMQRLKTNILGYASTREPTLSPTPHIPPSPYKEPSSPLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Anote "lumer 908581 unilateral frameshift mutation causing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MLCVLDYETELSPPMILEEPYETAV (P.ENGSPRIPMPONRSARTAKQLENDTREED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SPQPSENLISYFNNOTVNPKESILKRVKDIGYIFKEKFAKAVGQGGVEIGSQRYKLGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TANAETUATSAFUTUKPLKSTSLSLFYKKVYRLAYLKLNTIJEKLLSEHPELEHTIWT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Znote-"tumor 0.8547 bilateral frameshift mutation causing premature stop.; 600-118-744"
Zeitation [5]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Acote-"RBF64 bilateral tamilial deletion mutation causing
                                                                                                                                                                                                                                                                                                                                                                     /product-"retinoblastoma suspectibility protein"
/protein_id="AAMS9465.1"
/db_xret="G1:793995"
                                                                       /orqunism-"Homo sapiens"
Elmail: brenda/hatiz.eric.on.ea.
                                                                                              /db_xrel-"1axon:9606"
                            Location/Southitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /denc-"RB1"
/note-"300 [18-734"
/cumber-3
                                                                                                                                                                                                                       Zqene "RB1"
Znote:"G00 118 734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zuote: "G00 118 744"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zucite Paris 21x-744"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        premature stop"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KMNDSMD1SNKEEK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  premature stop"
                                                                                                                      /map "14q14.2"
1. .4839
                                                                                                                                                                                                                                                                                                                                                     /codon_start-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zroptano "na"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Acitation [5]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /replace-"la"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /replace "r"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /replace "c"
                                                                                                                                                                     'qene "RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /qene."KBi"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /qene "EMI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Appropriate "PB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /tone-"PB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Atene "RR1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /done "KB1"
                                                                                                                                                                                                                                                                                                                           Zuene "RBI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /qener "RB1"
                                                                                                                                                                                                                                                                                                      17.47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zaumber - 4
5.87 . . 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Z. radmint/
                                                 4H 4.9
                                                                                                                                                                                                                                                                              /mamper
                                                                                                                                                                                               177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cariation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Variation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sattafton
                                                    SCALL C'ES
                                                                                                                                                     .311.45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  UCX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HOXO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             UK X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOX.
                                                                                                                                                                                                  120 X ++
                       FLATURES
                                                                                                                                                                                                                                                                                                 877
```

```
/note-"Tumor GoSl3 unilateral trameshift mentation
resulting in premature stop: Associated with this mutation
is a large 13q14.3 sub-band deletion; GGG 118-744"
/citathon-15
                                                                                                                                                                                                                                                                                                                                                                                                                   Znote-"lumor GoS563 unilateral mutation causing premature
                                                                                                                                                                                                                                                                                                                                 Zhote "Tumor Gos559 mutation causing premature stop.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zhoke-"Lumor GoS559 mutation causing premature stop.; GoO-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zhote-"Tumor GoS159 unilateral mutation causing a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87.1
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         premature stop; G00-118 744"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              indels:
                                                                                                                                                                                                                                              1077, 1186
Zgone-"RB1"
Znote "GGG 118 784"
Znumber-10
                                                                                                                                                                                                                                                                                                                                                                                                                                stop: GUO:118-734"
/cltation=[5]
/replace="t"
1187, 1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             677. .744
/qene="RB1"
/note="G00-118-744"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /qene="RB1"
/note="G00 118-744"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note-"G00-118-734"
Znote-"G00 118-744"
                                                                                                                                                               /hote-"G00-118 744"
                                                                                                                                                                                                        /qene-"RBI"
/note-"G00:118 734"
                                                                                                         /note="G00-118-744"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /citation=[5]
/replace="t"
1265. .1452
                                                                                                                                                                                                                                                                                                                                                             /citation=[5]
/replace="t"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /cltation-[5]
/replace "t"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /replace-"ca"
1353 1469
/qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5.69e-310
4447.50
                                                                                                                                                                                                                                                                                                                                              G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1375
                                                                                                                                                                                                                                                                                                                                                                                                   /qene-"kB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /dene-"RB]"
                                                                                          /gene="RB1"
                                                                                                                                                   /qene-"RB1"
                                                                                                                                                                                                                                                                                                                  /gene-"KB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /number-13
                                                                                                                                                                                          .1076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93,868
93,868
98,928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /number=12
                                                                                                                                                                                                                                  /number-9
1077. .118
                                                                                855
                                                                    7number - 6
                                                                                                                         /number-7
856, .998
                                                                                                                                                                                /mmpcr-8
              znumber -5
                                                                                                                                                                                                                                                                                                                                                                                          1104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1320
                                                                                                                                                                                                                                                                                                       1095
                                                                                                                                                                                            999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            variation
                                                                                                                                                                                                                                                                                                        variation
                                                                                                                                                                                                                                                                                                                                                                                          variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CXOD
                             exon
                                                                                 exon
                                                                                                                                       exon
                                                                                                                                                                                            excu
                                                                                                                                                                                                                                                   OXOU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OXCU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       exon
```

T.		9 Gaps: 2	
	47 1	x HUMRBIMRNA (1	
45 45		Met ProProLysThrProArgLysThrAlaAlaThrAlaAlaAlaAlaAlaAlaAlaAlaBro 20 	0
작물	1788	ProAlaProProProProProFlodLudLuAspProdLudLuAspSendLyProdLu 40 UST 11 11 11 11 11 11 11	<u>ن</u> 27
5 1	41	AsptenbrotouvalargicuglubhegluglufhrdluglubroaspPhefhralaiou 60	0 17
5 <u>8</u>	- x :- x	CysclntysteutystleproAspitisValArgclnArgAlaTrpLeuThrTrpGluLys 80 	
5 8	81 378	Y – 4	000
ăo aă	101		20 97
> <u>\$</u>	1.2.1	GINLYSASDI] GIUI] GEFVA] HISLYSPHEPPEASDLEULEULYSGIUI] GASPTHE GASAAAACAAATGGGGGAAATTGATTAACTAAATTACTTAACTAAAAGAAATTGATACC S	40 57
3 £	# 55 # 55 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SetThibsValasphsualaMetSeiaiqLeuLeuLysLysTyraspValLeuPheala 1 	60 17
번 골	191	LouPhesertysteudlaargibreyschalcallefyrlauthrdinbroserserser 18 	8.0
\$ B	± r	CeserthreluiteasnseralateuvalteutysvalsertrpilethrPheLeuLeu 20	00
A 4:	162	9319/31sVallesGlmMetGluAspAspLeuVallleSerPheGlmLeuMetLeu 2 	20 97
5 %	152	'ysvallenaspiytebelletysleasetProBloMcthasleatysClubreTyrtys 2 	40 57
\$ ±	7		43
)- J	**		43
41	87.5	BPACGGATAGGAAAAGAACTAGAAAATGATAGAAGAATTATTGAAGTTCTCTGTAAAGAA 9	
5-		77	4.3
==	E r- 2	IIIAIG 1	037
s o	244 1038	AsosartandistraturalThrserasos)ytenProglavaldiuasotesserussarg 26 	63 097
S 8	26.4	C1 -	83
 	284	accama ann i in tanan i ann an ann an an an an an an an an an a	0 00

```
1757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                584 ProteutysSeribrSerieuserteubetyrtystysvallyrardicaalafyrteu tud
HIIIIIIIIIIIIIIIIII
2058 CCALTGAAATCLACCICTTTCACIGITTTATAAAAAAGIGTATCGGCTAGCCTAFALC 2117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2178 TGGARACTITITICAGA'N'ACTTGGASAATGAGTGATGAACTCATGAGAGAGAGAGTTG 2237
                                                                                                                                            1818 CTFGCATGSCFCTCRAGATFCACTTTATTTGATGTTAAAGAAGGAAGGAGGAGAA 1877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       384 lleGlySerGlnArgTyrLysLeuGlyValArgLeuTyrTyrArgValMetGluSerMet 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SerThrSerGinAsnLeuAspSerGlyThrAspLeuSerPheProTrp11eLeuAsnVal 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        464 LeuAsmi.cul.ysAlarheAspPhcTyrLysValileGleSerPheiletysAlaGludly 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             504 LeuAlaTrpLeuSerAspSerProLeuPheAspLeu1.eLysGlnSerLysAspArgGln 523
                                                   304 AsnLeuAspGluGluValAsnVallleProProHisThrProValArgThrValMetAsn 323
                                                                                                                                                                                                                                                                                                                                                                                                          404 LeutysSerGluGluGluArgLeuSerIleGlnAsnPheSerLysLeuteuAsnAspAsn 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               424 IlePheHisMetSerLeuLeuAlaCysAlaLeuGluValValWatAlaThrTyrSerArg 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        544 ThrAlaAlaAspMetTyrLeuSerProValArgSerProLysLysLysGlySerThrThr 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  604 ArgLeuAsnThrLeuCysGluArgLeuLeuSerGluHisProGluLeuGluHisIlelle 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         624 TrpThrLeuPheGlnHisThrLeuGlnAsnGluTyrGluLeuMctArgAspArgHisLeu 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             644 AspGlatTeMetGysSetMetTytClyttleCystysValtysAsmitcAsptentys beat HIHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             564 ArgValAsnScrThrAlaAsnAlaGluThrGlnAlaThrScrAlaPhcGlnThtGlnLys 583
1158 AAAACTCTTCAGACTGATTCTATAGACAGTTTTGAAACACAGAGAAAAGT
                                                                          344 HeSerfyrPheAsnAsnCysFhrValAsnProtysCtuSerHeLeutysAtqVaH.ys
                                                                                                                                                                                                                                ATTTOCTATETTTAACAACTGCACTGTAATCCAAAACAAAGTATACTGAAAAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                 ThrileGinGinLeuMetMetlleLeuAsnSerAlaSerAspGinProSerGluAsnLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           524 ClyrrothraspHisterClaSerAlaCysPtoixuAshixuTtoixuGlnAshAshHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           484 AsnLeuThrArgGluMetIleLysHisLeuGluArgCysGluHisArgIleMetGluSer
                                                                                                                          324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   444
                                                                                                                                                                                                                                1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           â
                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                    Q
C
                                                                                                                                                                                                                                                                                                                                        òχ
                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                          90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ë.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Οp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                 ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
```

```
Š
                                                                                                                      9
                                                                                                                                                 ŝ
                                                                                                                                                                         qq
                                                                                                                                                                                                     ò
                                                                                                                                                                                                                             qd
                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                     QCI
                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT 08-AUG-2001
                                                                                          2418 AIGCAGAGACTGAAAACAAATATTTGCAGTATGCACCAGGCCCCCTAGCTTGTCA 2477
                                                                                                                                                                                    724 Prolletonis HeproardSorprolyttysPhebroSerSerProleuarq Hepro 743-
HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HER OFAAN HEROPELHAGGANGCH AGAAGH HEGERAAGH HELLIH HELLIH HEROPELHAGGANGCH 2537
                                                                                                                                                                                                                                                                                                                                                             2778 WALLELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2238 GACCAAATTATGATGTGTTCCATGTA1GGCATATGCAAAGTGAAGATATAGACCTTAAA 2297
                                       2538 OGAG SGAACATCTATATETT CACCOT GAAGAGTCCATATAAAATT TCAGAAGG ICTGCCA 2597
                                                                                                                                                                                                                                                                                                                       824 GTYSerAspilluAlaAspGTySerLysHisLeuProGTyGTuSerTysPheGInGInLys 843
                         664 Phet/ystletleValthrAlalyttysAspteuProHisAlaVa:GlnGluthrPhet/ys 683
                                                                                                                                 704 Met CluArqueulys Thr Asulle Leuglufyr Alaser Thr Arqueoffer Leuser 723
                                                                                                                                                                                                                                        744 GlyGlyAsulleTyrIleSerProLeuLysSerProTyrLysIleSerGluGlyLeuPro 763
                                                                                                                                                                                                                                                                                            764 Thi ProthilysMetthi ProArdSerArgileLeuValSerileGlyGluSerPheGly 783
                                                                                                                                                                                                                                                                                                                                                784 Thr Ser Clurys PheClurys Fleas and InMetVal Cysas nSer AsparaVal Leulys 803
                                                                              584 ArqVallemlletysGluGluGluTyrAspSerIlelleValPheTyrAsnSerValPhe
                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chegory, R.J., Wills, K.N. and Maneval, D.C. Recombinant adenovital Vector and methods of Patent: US 6210939 A 7 03 APR 2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative;
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 7 from patent US 6210939.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        I end, h.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Localion/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /ordanism-"unknown"
617 c 593 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2898 GATACCICAAACAAGGAAGAAA 2921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 864 AspThrSerAsnLysGluGluLys 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR144797
AR144797.1 GI:15106664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1,546,409
4437,50
93,75%
93,75%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       l (bases 1 to 2995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98.708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (16,6,7)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                475 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AR144797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Simularity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               John Watch:
2007 Match:
28:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
LILLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             I-strenat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESTEE 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR144797
Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KLYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S. OIK.E
                         5
                                                 Ξ
                                                                             ŝ
                                                                                                     ŝ
                                                                                                                                 5
                                                                                                                                                      ã
                                                                                                                                                                                   5
                                                                                                                                                                                                          Ĩ
                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                             =
                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                   i
                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
```

```
979 CAIGAAIGIAAIAIAGAIGAAAAAIGIIIAIIICAAAAAIIIIATACOUTIIATATG 1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .039 ANTICTCTTGGACTTGTAACATCTAATGGACTTCCAGAGGTTGAAAATCTTTCTAAACGA 1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       284 EysThrIeuGlnThrAspSerIleAspSerPheGluThrGluArqThrFruAralysSor 404
                                                                                                                                                                                       81 ValSerServ JAsrfflyvalLeedily/27Tyr Hedludynlyntyr daladroff poly 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .01 IleCys1lePheIleAlaAlaValAspLeuAspGluMetSerPheThrPheIhrGluLeu 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              499 CAGAAAAACATAGAAATCAGTGTCCATAAATTCTTTAACTTACTAAAAGAAAATTGATACC 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        141 SerThrLysValAspAsnAlaMetSerArqLeuLeuLysLysTyrAspValLeuPheAla 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  161 LeuPheSerLysLeuGluArgThrCysGluLeuIleTyrLeuThrGluProSerSerSer 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      619 CICTICAGCAAATIGGAAAGGACAIGIGAACIIAIAIAITIGACAAAAAAAAAGAAATIGG 678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 799 IGTGTCCTTGACTATITIATIAAACTCTCACCTCCCATGTTGCTCAAAGAACATATAAA 858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             859 ACAGCTGTTATACCCATTAATGGTTCACCTCGAACACCCAGGCGAGGTCAGAACAGGAGT 918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       919 GCACGGATAGCAAAGTAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAA 978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74.4
                                                                                                       61 CysGlnLysLouLysTleProAspHisValArqGlnArqAlatrpLouTheTrpClnLys 80
                                                                                                                                                              21 ProAlaProProProProProGludluAspProGludluAspScrGlyProGlu 40
                                                                                                                                                                                                                                                                        41 AspleuProLeuValArqLeuGluPheGluGluThrGluGluProAspPheThrAlaLeu 60
                                                   1 MetProProLysThrProArgLysThrAlaAlaHubrAlaAlaAlaAlaAlaAlaBlaCluPro
                                                                                                                                                                                                                                                                                                                                                                                                                  121 CintysAsniteGinileSerValHisLySPhePheAsnieuLeuLysGinileAspilm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       201 Alalys61y61sValleu61nMet61sAspAspLeuVall1e8erFhe61h.n.met.neu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               221 CysVallenAspTyrPheIleLysLeuSerFroFroMeilzenLeubysSlufroTyrLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        244 AshserLeuGlyLeuValThrSerAshGlyLeuProGluValGluAshLeuSerLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  264 TyrdladlulleTyrLeaLysAsuLysAspLeaAspAlaArqLeaPheleaAepHlaAep
                                                                                   US-09-026-459A-49 (1-871) x ARI44797 (1 2995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241 Thr -----GlySer-
```

13.9 CATATATATATATATATATAAGAGAAATTTGCTAAAGGTGTGGGACAGGGTTGTGTTTT 1458 1155 AAAACTCTTCAGACTGATTCTATAGAGAGTTTTGAAAGGGGGGAGAACACGGGAAAAAGT 1218 2.13 - 0.0001AAATACACTITGTGAACGCTTOTGTCTGACACGCAGAATTAGAACATGTGTTT 2.134 - 0.0001AAATACACTTGTGAACGTTOTGTCTGACACACACACAGATTAGAACATGTGTATC 2.134 279 ACHATGGAACAATTAATGATGATFTTTAAATTTCAGCAAGTGATCAACCTTTCAGAAAATCTG 1338 1349 ATTICCIAITITAACAACTGGACAGTGAATGCAAAGAAGTAIACTGAAAAGAGTGGAAG 1398 1519 CITAAATCAGAAGAAGGATTATCCATTCAAAATTTTAGCAAACTTCTGAATGACAAC 1578 (699) SITAATITAAAAGCCTTTGATTTTTACAAAGTGATGAAGTTTTATTAAAGGGGG 1758 818 / HBGATGGCTCTCAGATTCAGGTTTATTTGATCTTATTAAACAATGAAAGGACGGAGAA 1878 24559 CCATTGAAATCTACCTCTCTTTCACTGTTTTATAAAAAAGTGTATGGGCTAGGCTATCTC 2118 494 ASHLEMASpGluGluValAshVallleProProHisThrProValArgThrValMetAsh 323 344 HesertyrPheAsnAsnCysThrValAsnProLysCluSerHeLeuLysArgValLys 363 364 AspiledlyfyrllephelysolufyspheAlaLysAlaValGlyClsGlyCysValGlu 383 384 IledlyserslnArgTyrLysLeuGlyValArgLeuTyrTyrArgValMetGluSerMet 403 4.4 leutysserGluGludluArgLeuSerlleGlnAsnPheSerLysLeuteuAsnAspAsn 423 424 HePheHisMetSetLeuLeuAlaCysAlaLeuGluValValWetAlaThrTyrSerArg 443 444 SerfhrSerdlnAsnLeuAspSerdlyThrAspLeuSerPheProTrp1leLeuAsnVal 463 464 LeuAsnieul.ysAlaPheAspPheTyrLysValileGluSerPheilet.ysAlaGluGly 483 484 AshleuthrargGluMetlleLysHisLeuGluArgCysGluHisArgileMetGluSer 503 5.44 - 31yProff.c AspHistouGluSerAlaCysProf.cuAsnLeuProf.cuGluAsnAsnHis - 543 564 AraValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAlaPhaGlnThrGln1y- 583 584 ProtecutysSerThrSert.euSert.euPheTyrt.yst.ysValTyrArgl.euAlaTyrt.eu 603 604 ArgleuAsnIhrLeuCysCluArgleuLeuSerGluHisProGluLeuGluRisHleHle 623 624 TrpTh:LeuPheGlnHisThrLeuGlnAsnGluTyrGluLeuMetArqAspArqHisLeu 643 Ē <u>a</u> Ś = Š 3 Š 2 $\frac{1}{2}$ Š ā Ē Š Ē :~ _r ŝ ---5 Ξ 5 ::

```
1 (bascs 243 to 4740)
Loc,W.H., Bookstein,R., Hong,F., Young,L.J., Shew,J.Y. and Lvc,E.Y.
Human retinoblastoma susceptibility gene: cloning, identification,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eskarjolu; Metassus Chordutu, Crumlutu, Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ee, E.Y., Bookstein, R., Young, L.J., Lin, C.J., Rosenfeld, M.G. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Draft entry and computer-readable copy of sequence in (1) kindly
provided by R.Bocksteil, 27-APR-1987.
2359 GGTGTTTTGATCAAAGAAGAGGGTATGATTCTATTATAGTATTGTATAACTCGGTCTTC 2418
                                                                                                                                                                                                                                                                                                                                                                                             2539 GGAGGGAACAICTATATTICACOOTGAAGAGIQCAIAIAAAATTICASAAGGIGIGGGAA 2598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2599 ACACCAACAAAAAIGACICCAAGA CAAGAAICIIAGIAAAIIGGIGAAICATICGGG 2658
                                                                                                                                                                             704 MetGlnArgleuLysThrAsnIleLeuGlnTyrAlaSerThrArgProProfhtLeuSer 723
                                                                                                                                                                                                                                                                                                                                                      744 GlyGlyAsnIleTyrIleSerProLeuLysSerProTyrLysIleSerGluGlyLeuPro 763
                                                                                                                                                                                                                                                                                                                                                                                                                                        764 ThrProThrLysMctThrProAt4SetArgileLeaValSetHcClyCluSerPheGly 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             784 ThrSerGluLysPheGlnLysIleAsnGlnMetValCysAsnSerAspArqValLcuLys 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 804 ArqSerAlaGluGlySerAseProProLysProLeuLyoLyoLeuArqPheAcpIleGlu 823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      824 ClySerAspCluAlaAspClySerLysHisLeuProClyCluSerLysPhedInGlnLys 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          844 LeuAlaGluMetThrSerThrArgThrArgMetGlnLysGlnLysMetAsnAspSerMet 863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2779 GGATCAGATGAAGTAGATGGAAGIAAACAICICCCAGGAGAGAGAGICCAAATTICAGCAGAAA
                                                                                      684 ArgValLeutleLysSluGluGluTyrAspSerIlelleValPheTyrAsnSerValPhe
                                                                                                                  retinoblastoma susceptibility.
Homo sapiens (clone: RB-[1,5]) foetus retina cDNA to mKNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Molecular mechanism of retinoblastoma gene inactivation retinoblastoma cell line Y79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human retinoblastoma susceptibility mRNA, complete cds. M15400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Proc. Natl. Acad. Sci. U.S.A. 85 (16), 6017-6021 (1988)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Science 235 (4794), 1394-1399 (1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2899 GATAUCTCAAACAAGGAAGAAA 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               864 AspThrSerAsnLysGluGluLys 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        M15400.1 G1:190958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 480)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87149066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          88320373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lee,W.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3823889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3413073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HUMRBS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REPUBLISHED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHWHIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J. .. PNA ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDICINE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     271111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                    ්
- .
                                             q
                                                                                         ô
                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

```
RVI KPSAEGSNPPKPLKKLPEDTEGSDEAMSKIILPGESKFÖGKLAEMISTFTRMAKA
KMDSMDISNKEEK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KLIYYKVMESMI KSEHERUS I ONESKILINON I FHMSI LACALEVVMATYSKSI SONILIS
OTDLISPPWITINVI NI KAPIDPYKV I ESPIKABONLI PEMIKIILEROBIIR IMESLAMLSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LEGHTLÖNEYELMRDRHEDOTMMCSMYGTCKVKNIDLAFKTTOVTAYKDLPHAVGETFK
RVLTREEEXTUSTIVFYNSVEMOREKTNILGYAST REETESPTPHTPRSPYKEPSSPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOKETIECH LOEVKNYPEKNET PEMNSLOT VESNOLDEVENLSKPYEET YLKNKDI 199P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LELDHUK LLOTUS TUSE ETORT PRKSNIJDERVNI I PPHI PVRI VMNT 1001,MM1 LNSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STQPSENLT SYENNET VNPRES TERRVALL BY FERREAKAVOUGUVET GSORYKLICV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SPLFULIKŲSKŪREGETDIILESAUPLNI, PLONNII I AAUMYLSPVKSPKKRISTI KVNS
TANAETŲAT SAPŲTŲK PLIKSTSLSLPYKKVYPILALINTI (PEPLILSEIIPELEULI IMT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POGNIY ISPIRAPYN I SEGLPTPINM PRAKTLIVA IGESFOTSEKFUN INQMVCNSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /translation-"MPPKIPKKIAAIAAAAABPPAPPPPPPPPPPEDPEQDSGPEDLPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VREEFEETEEPPFT ALCOSTIKTPEHVEERAMETWERVSSVIIGVLOGY LÖKKKELWCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 F.LARVDLDEMSFTTLLSYRK LYELSVHKEFNLLKETDFSTKVDNAMSRLLKKYDVLFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LESKLERTOPLIYLTQPSSSISTETNSALVLKVSWITFLLAKGEVLQMEDPLVISFQL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MICVLDYFIKLSPPMLLKEPYKTAVIPINGSPRTPRRGONRSARIAKQLENDTRIIEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   259 GACCTGCCTCTCGCTCTCGCCTTGAGTTTGAAGAAACAAGAAGAAGAAGAAGATTTTACTGCATTA 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81 ValSerSerValAspOlyValLenOlyOlyTyrIleOlnLysLysCluLenTrpOly 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    879 OLLICALCLOLOGALOGAGIALIGGGAGGITATALICAAAAGAAAAGGAACIGTGGGGA 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     199 Produktinannangagannan Palasagagagagagagagagagagagag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101 HerystleebelleAlaAlaValAspLeuAspCluMetSereheThreheThrGluLeu 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21 ProAlaProProProProProProGluGluAspProGluGluAspSerGlyProGlu 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41 AsptemProtenValArgLenGluPheGluGluThrGluGluProAspPheThrAlabeu 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 CysolidzysteutystleProAspHisValArgGluArgAlaTrpLeuThTrpCluLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1038 bp upstream of EcoRI site; chromosome 13q14.1 q14.2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Znote-"retinoblastoma susceptibility protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     852 q 1483 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "358.336 118 734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                 Zprotein id-"AAA69807 l"
                                           Zorganism-"Homo sapiens"
Zdb yrot-"taxon-Geng"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     58 00 026 459A 49 (1 871) x HUMRBS (1:4740)
                                                                                              /map="14g14,2"
/clone="RR [] 51"
/tissue_type="retina"
/Ter_ctate "toetwo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                         "GI:190959"
  Location/goalitiers
                                                                                                                                                                                                                                                                                                     /product-"rbs mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                              /codon_statt-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1,56e·406
4499,50
                                                                                                                                                                                                                         Approx " HH]"
                                                                                                                                                                                                                                                                                                                                                     /qene="RBI"
                                                                                                                                                                                                                                                                               /tene-"KB1"
                                                                                                                                                                                                                                                                                                                                2425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      91.41%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93.318
                                                                                                                                                                                                                                                    4740
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alb xret-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      All, Airt
                                                                                                                                                                                                    4740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Albernment Scores:
                          Scott car
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4000
                                                                                                                                                                                                                                                       THANA
                                                                                                                                                                                                                                                                                                                                Sil
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            :-
:::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ē
```

```
1278 CACTATCCAACAATTAATGATGATTTTAAATTCTGCAAGTGATCAAGCTTCAGAAAAATCT 1437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      978 ACATGAATGTAATATASAFSASGTSAAAAATGTTTATTTCAAAAATTTTATACTTTTAT 1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1158 TAMANGTOTTONGACTGATTCTATAGACAGTTTTGAAAGAGAGAAGAAGAAGAAAAAG 1217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1338 GATITCCIATITIAACAACTGCACAGGAATCCAAAAGAAAGIATACIGAAAAGAGGGAA 1397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1518 GCTTAAATCAGAAGAAGGATTATCCATTCAAAATTTTAGGAAACTTCTGAAATGAAA 1577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   * ○ *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              220 uCysValicuAsplyrPbelleLysLouSerProProMotLouLougsSlafnolyn 1y 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 363 sAspileSlyTyrilePheLysOluLysPEcAlaLysAluValSlySlySlySValG1 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        883 ulledlyserGlnArgTyrLysLeudlyValArqLeuJyrTyrArqValMerGluSerMe 403
                  140 rSerThrTysValAspAsbAlaMetSerArgLeuLeuLysLysTyrAspValLeuPheAl 160
                                                                                                                                                                           618 ACDITICAGGAAAIIGGAAAGAAGAGIGAACTIAIAIAFIIGAGAAAAAAAGAF
                                                                                                                                                                                                                                                                                                                                                                                       798 ATGTGTCCTTGACTATTTATTAAACTCTCACGCATGTTGCTCAAAGAACCATATAA 857
                                                                                                                                                                                                                                                                                                                                                                                                                                                            858 ARCAGCIGITATACCCATTAATGCTFCAGTCCAACTACCCAAGGTCAGACAAGAGAGGG 917
121 GloLysAsolle GloileSerValHisLysPhePhoAsolcoulcutysGloileAsolh 140
                                                                                                                                                                                                              180 rileSerThrGluIleAsnSerAlaLeuValLeuLysValSerTrpIleThrPheLeuLe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         244 -AsnSerLeuGlyLeuValThrSerAsnGlyLeuProSlaValGluAsnLeuSerLysAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          343 alleSerTyrPheAshAshCysThrValAshFroLysGlaSerTleLentlysArqValLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         458 AATTGGATCACAGGATACAAACTTGGAGTTCGCTTGTATTACCGAGTAATGGAATCCAT
                                                                                                                                                                                                                                                                                 200 uAlalysSiyalaValleszisMersiaAspAspieaValilesziihettata uMette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               283 ptysthrieudinthraspserlieaspserPhediuthrdinarathrearatysse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         323 nThrIleGinGinLeuMetMetileLeuAsnSerAlaSerAspGinProSerGluAsnLe
                                                                                     240 sThr------01yser-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                       ŝ
                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                          £
                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                    â
                                                                                                                                                                                                                                                                                                                                                                                                                           à.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             င်
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                 37
```

```
8.53e-306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4389.00
93.648
93.648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               105311 1 01.591083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unclassitied.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1489 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percest Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        105311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ..
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESS 10N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VCI SAHV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                          1838 CATTITICATATGTCTTTATTGGCGTGCGCTCTTGAGGTTGTTGAAGGGGCACATAIAAACAG 1637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22.98 ALTCAMANICATIGIAACAGATACAAGATCTIGCTCAIGCTGTICAGGAGACATICAA 2357
                                                                                                                                                                                                                                                                                     HIR POLICE ALGOLO I CAGA FILO ACCITTA FITTGA I CATTA A A CAATCA A GGOOG GGG GG THE A FITTGA I CATTA A A CAATCA A A CAA TCA  TCA A CAA TCAA TCA A CAA TCAA TCA A CAA 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 (8) (ACTGCASCAGAIAIGIATCTTTCTCCGTGTAAGATCTCCAAAGAAAAAAGGTTCAACTAC 1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OOB GCCATTGAAATCTACCTCTCTTTCACTGTTTTATAAAAAAGTGTATCGGCTAGCCTATCT 2117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.18 ONSCIANATACACTITGIGANOSCCTTCTGTGTGTGGGGCACCAGAAITAGAACATATGAT 2177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2358 ACCITITICA ICAAAGAAGAGGGGIATGATTATATAGATTCTATAAGTICGGTCTT 2417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24'8 ACCANTROTOACNITOTOTOGAAGCCCTIACAAGITICCIAAGTGGGCTIACGGAIITGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-08 AACACCAACAAAAAIGACTCCAAGAICAAGAAICIIAGIAICAAIIGGIGAAICAIIGGG 2657
424 nlieBheHisMetSerLeuLeuAlaCysAlaLeuGluValValMetAlaThrlyrSerAr 443
                                                                                                                                                                                                                         444 qSerThrSerGlnAsnLeuAspSerGlyThrAspLeuSerPheProTrplleLeuAsnVa 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                              464 lLeuAsnLeuLysAlaPheAspPheTyrLysValIleGluSerPheIleLysAlaGluGl 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             483 yAsnieuthrangtumetilenysHisLeugluargCysCluHisArqHeMetGluSe 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       For read and arrelation of the series of the second sections of the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second seco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94.1.s.hrAlaAlaAspMetTyrLeuSerProValArgSerPrelysLysLysGlySerThrTh 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     563 rArqValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAlaPheGlnThrGlnLy 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sec Oproto tysserthreenperforbotterBetyntystysValTyrArgiesAlaTyrte 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6-4 uArgicuAsnihriken@ys@luArgfeuleuSerGluHisPreGluLeu@luHisileii 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             623 eTrpThrheuPheGlaHisThrheuGlaAsuGluTyiGluLeuMetAigAspAigHisLe 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ** 5 $ SPRELYSTLOTTEVALThrAlafyrLySASpLouProHisAlaValGluThrPhety 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           684 sArqVaiteuIleLysGluGluGluTyrAspSerIleIleValPheTyrAspSerValPh 703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ' · eMetGluAr4LeuLysThrAsuIleLeuGlaTyrAlaSerThrArgProProThrLeuSe 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         224 rProlleProHislleProArqSerProTyrLysPheProSerSerProLeuArq11ePr 743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74 / oslyclyAsmileTyrileSerProLeuLysSerProTyrLysileSerGluslyLeuPr 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  764 OThrProThrLysMetThrProArgSerArglleLeuValSerIleGlyGluSerPheGl 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 783 ythrsordingsPheClntysTleasnClnMetValCysAsnSerAspArgValLcuty 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.2 + a31yProThrAspHisLeuGluSerAlaCysProLeuAsnLeuProLeuGlnAsnAsnHi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4.1
                                                                                                =
                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           : --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \geq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \frac{2\gamma}{\gamma}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
```

```
linear PAT 02 DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2718 AAGAAGTGCTGAAGGAAGCAAGGCICCIAAAGCACTGAAAAAGTACGCTTTGAIAIIGA 2777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80% sArgSerAlaGluGlySerAsnProProLysProLeuLycLysLeuArgPhoAsFileGl 82%
                                                                                                                                                                                                                                                                                                                                                                                                    823 uClyScrAspCluAlaAspClyScrLysHisLcuProClyCluScrLysPhedInGIntry 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               84? sLouAlaGluMetThrSerThrArgThrArgMetGlnLysGlnLysMetAsuAspSerMe 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81 ValSerSerValAspGlyValLeuGlyClyTyrt1eSIntystysGluteuTrpGly 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101 ileCysilePheileAlaAlaValAspLeuAspGluMetSerPheThrPheThrGluLeu 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MetProProLysThrProArglySThrAlaAlaThrAlaAlaAlaAlaAlaAlaGluPro 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4. ALBERTHALLI HALLI HAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 CysClntyst.cutystlcProAspHisValAtyGluAtyAlaTtpLeuThrTrpGluiys 80
41 AspLeuProLeuValArgLeuGluPheGluGluThrGluGluProAspPheTLrAlaLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241 GETTGATGTGTGGATGGAGTTTGGAGGTTATAFTGAAAAGAAAAAAAGGAAGTGTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 4597)
Dryja.J.P. and Priend,S.
Human DNA in the diagnosis of retiroblastoma
Patent: EF 0259021 A2 1 09-MAR-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4397 pp
Sequence 1 from Patent EP 0259031.
105311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4597 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-026-459A-49 (1-871) x 105311 (1-4597)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2898 CCATACCTCAAACAACGAAGAAA 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
1. .4597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"unknown"
1 842 c 812 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         863 tAspThrSerAsnLysGluGluLys 871
```

> .a	121	GlutysAsultedlutteserVallistysPhePheAsulteutysGlutteAsThr TITTHTHTHTHTHTHTHTHTHTHTHTHHTHHHTHHHTHH	140
	141	14 SerthriysValaspasnalametSerargiculculgulysiystaspvalicubeala 160 	160 4 80
S	181	Learbesettgsteudtaarathregsdiut.euttetgeteuthrethierbserserser 	180 540
is a	181	The Serfine Studio Aspiser Ala Leu Valle High High High High High High High High	200
14 A	201	ALALYSSIYOLOVATLOOGTOMOOTGIUASPASPLOOVATTOOSOOPOOGTOLOOMOOTLOO 	220 660
54 .C	5.6.1	C'ysvallouasplyrbhelletystouserProbroMettouteutysGluprofyrtys FIFIFIFIFIFIFIFIFIFIFIFIFIFIFIFIFIFIFI	240
>- :	241	Thr Glyser Construction of the Construction of	243
i :-	24.4	A ANT TOT TALK COATT AND COTT TO AND TOO AND TO AND TOTAL AND AND TOTAL AND AND TOTAL AND AND TOTAL AND AND TOTAL AN	780
ے	781	GPACBGATAGPAAAACAACTAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAA	840
:	24.3		243
£	84 1	CATGAATGTAATATAGAGGTGAAAAATGTTTATTTGAAAAATTFTATAGGTTTTTATG	906
× .5	244	Ashise FlewelyLeadAilthr Se rAshelyLeapProflaValidFuAshLeuSe rLysArg 	263 960
5 . 5	264	1710 10 10 10 10 10 10 1	283 1020
⊳ a	284	LysthrianglichraspsoritoaspsorPhedluthrGluarathrProarqiysSor HTLLLITHTLICHTHTHTHTHTHTHTHTHTHTHTHTHTHTHTHTHTHTH AAAACTOTHAAAACAAAAAAAAAAAAAAAAAAAAAAAAAA	303
:s	104	AsutenAspatuatuvatAsuvatTieProProBisThrProValArgThrValMetAsn 	323
is a	1141	The tred had bacomed more free consists a hader Aspetia Prosero Luasbica.	343
14 A	444	TESSCH TYTHOASIASIE TSTUTTELLE TELEGIESSETTELE TELETTELLE TELETTEL TELETTEL TELETTELLE T	363 1260
j⊷ .a	16,4	ASPITACIPTINE FOR THE FORM ASPECTATION OF THE FORM AND THE FORM ASSAURANCE OF THE FORM ASSAURANCE OF THE FORM ASSAURANCE OF THE FORM AND THE FORM ASSAURANCE OF THE FORM AND T	383 1320
شہ	584 1 42 1	LoglySerGlnArglyLLySLouGlyValArglouTyrTyrArqValMotGluSerMet 	403
52	404	LeullySSert/Full Hill Hill Hill Hill Hill Hill Hill H	423
; -	474	TephellisMetSerlænLeuAlaCvsAlaLeusluValValMetAlaThrTvrSerArg	443

qq	1441		=
οy	444	SerThrSerGInAsnicuAspSerGIyThrAspicuSerTheProTrp1.clcuAsnVal 463	
qq	1501	AGTACATCTCAGAATCTTGATTCTGGAACAGATTTGTCTTTCCCATGGATTCTGAATGTG 1560	ę
Ś	464	LeuAsnLeuLysAlaPheAspPheTyrLysValIleGluserPheIleLysAlaGlustly 484	_
qn	1561	CITTAATITTAAAAGCCTTTGATTTTTACAAAGTGALGGAAAGTTTTATCAAAGCAGAAGCTTGZU	Ξ.
δ·	484	AsnLeuThrArgGluMet IleLysHisLeuGluArgCysGluHisArg11eMetGluSer 509	_
qq	1621	AACTTGACAAGAAAATGATAAAAGATTTAGAACGATGTGAAGATCGAATGAAGATGC 1680	2
oy .	504	LeuAlaTrpleuSerAspSerProteuPheAspteuHetysCluSerTysAspArgfu 523	-
90	1681	CTIGCALGICTCTCAGALTCACCTTTATTTGATCTTATTAAACAATCAAAGGGCGGGGAA 1746	2
ζ	524	GlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuProLeuGlaAsnAsnHis 54 *	_
qn 	1741	GGACCAACTGATCACCTIGAALCTGCTIGTCCTCTTAALCTTCCTCTCTAGAALAALCAC TBOO	2
Ś	544	ThralaalaaspMetTyrLeuSerPreValarge=rPretysLysLystlySerThrThr 563	_
다 <u>다</u> .	1801	ACTGCAGAGATATGTATCTTTCTCTGTAAGATGTCCCAAAGAAAAAGGTTCAACTAAG 1860	Ξ
, O.Y	564	ArgValAsnSerThrAlaAsnAlaGluThrGlnAraThrSerAlaPheGluthrGlutys 583	_
da	1861	CGTGTAAATTCTACTGCAAATGCAGAGACACAAAGCAAGC	9
γo	584	ProLeuLysSerThrSerLeaSerLeuPhdTyrLysLysValTyrArqleuAldTyrLeu 603	_
qu	1921	CCATTICANT THE CONTROL OF THE CONTRO	2
ò	6.04	ArgLeuAsnThrLeuCysGuArgLeuLeuSerGlaHisProtlaHauthallisHetle 623	_
QQ	1981	CGGCTAAATACACTTTGTGAACGCCTTCTGTCGCGAGCACAAATAGAAAATAAACATC 2040	=
φy	624	TrpThricuPheCinHisThricuCinAsnclulytCluicuMetArgAspArgHisLeu 643	_
qq	2041	TGGACCTTTTCCASCACACACGGGGAATGAGIAIGAA CAIGAGAGACAGACAILLG 2100	9
ć	644	AspGInTleMeLMetCysSerMetTyrGlyIleCysLysValLysAsulleAspLasLys 663	_
qu.	2101	GACCAAATTATGALGIGIICCATGTATGCATATGCAAAGTGAACAATATAGAACTTAAA 2160	á
ć	664	PheLysilelleValThrAlaTyrLysAsplæuProliisAlaValGlnGluThrFhelys 683	
qu	2161	TTCAAAATCATTGTAACAGCATACAAGGATCITCCTCATGCTGTTGTGAGGAGACATTGAAA 2220	0
Οy	684	ArgVall.culletysGluGluGluIyrAspSerileTleValPheTyrAshSerValPhe 703	_
qu	2221	CGTGTTTTGATCAAAGAAGAGGGGTTTTTTTTTTTTTTT	2
ςò	704	MetGloArqLeuLysThrAsnTleLeuGloTyrAlaSerThrArqFroFroThrLeuSer 723	_
Q(1	2281	ATGCACAGAGACTGAAAAAAAAAAAAAAAAAAAAAAAAA	=
ογ	724	ProlleProfits1]eProArqSerProfyrLysPheProSerSerProtenArd1]ePro 743	_
qq	2341	CCAATACCICACATTCCTCGAAGCCCTTACAAGTTTCCTAGTTCACCTTACGGTTCTCT 2400	9
ï	744	GlyGlyAsn Cefyr HeSerbreteatyske frotyrbys Neserolastyla about 763	
qu	2401	GGAGGAACATCTATTTCACCCCTGAAGAGTCCATATAAAATTTCAGAAAGTTTGCACA 2460	=
à á	764	764 TheProTherySMetTheProArgSerArglledesUValSerTheSlysluSerFhesly 784 [11] [11] [11] [11] [11] [11] [11] [11]	_ =
2		Democratical Manager Control of the	=
ŝ	784	ThrSerGluLysPheGlnLysTleAsnGlnMetValCysAsnSerAspAraValLautys RustHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH	~

```
PAT 02-DEC-1994
                             2521 ACTICIGAGAAGIICCAGAAAAIAAAICAGAIGGIAIGIAACAGCGACCGIGIGCICAAA 2580
                                                                                                                17-1 CIGGCAGAAATGACTICTACTCGAACACGAAATGCAAAAAGCAGAAAATGAATAGCAIG 2750
                                                                                                 x24 GlySerAcfGluAlaAspGlySerLysHisLeuProGlyGluSerLysPheGluGlnLys 843
                                                                                                                                                                 #44 LeuAlaGluMetThrSerThrArgfhrArgMetGlnLysGlnLysMetAsnAspSerMet 863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A) ValsorsorvalAspolyVallously() yTyrilocln(ystystysty) outrpC!y 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10 Technology of the HealaAlaValAspLeuAspGluMetSerPheThrPheThrGluLeu 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 SlnLysAsnIleGluIleSerValHisLysPhePheAsnLeuLysGluIleAspThr 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4) AspteuProteuValArgleuGluPheGluGluThrGluGluProAspPheThrAiaLeu 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41 AysGlnLysLeuLysIleProAspHisValArgGluArgAlaTrpLeuThrTrpGluLys 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MetProProLysThrEroAraLysThrAlaAlaThrAlaAlaAlaAlaAlaAlaGluPro 20
                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                  ⊇NA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dryja.T.P., Friend, S. and Yandell,D.W.
DIAGNASIS OF RETINOBLASTOMA
Patent: WO 8906703-A 1 27-JUL-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  813 q 1454 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              !ongth:
Matches:
                                                                                                                                                                                                                                                                                                                                (09369 Arom Datent WO 8906703.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-199A-49 (1 871) x 109369 (1-4597)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
1. .4597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism-"unknown"
841 c 813 a
                                                                                                                                                                                                                                                               2741 BALADITPAAACAAGGAAGAAA 2784
                                                                                                                                                                                                                               864 AspihrSerAsnlysGluGluLys 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 720-305
                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 4597)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4382.00
                                                                                                                                                                                                                                                                                                                                                                               I09469.1 GI:587899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             93,548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97.468
                                                                                                                                                                                                                                                                                                                                                                                                                                               Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1485 a
                                                                                                                                                                                                                                                                                                                                                                                                              Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                ULKROWL
                                                                                                                                                                                                                                                                                                                                                                 698603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fervent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Duery Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOUTCE
                                                                                                                                                                                                                                                                                                                                              NOTHNIES
                                                                                                                                                                                                                                                                                                                                                                                                                              K. AN. SM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE THINT
                                                                                                                                                                                                                                                                                                                                                                ACCESS: AN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. JUENAL
                                                                                                                                                                                                                                                                                               RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEFFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOW TEST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R1::18
                                                                                                                                                                                                                                                                                                                 494 6.01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
```

```
1141 ACTATCCAACAATTAAIGAIGIIIAAATTCAGCAAGIGATCAA@OTTCAGAAAAICTG 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1261 GATATAGGATAPATPTAAAQAQAAATFTAPTAAAGPGGGGGGGGGAAAAAAAGATGTGTATPGAA 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1321 ATTGGATGACAGGATACAAACTTGGAGTTCGCTTGLALLAGGGAGTAATGGAATGCATG 1380
                                                               141 ScrThrigsValAspAsnAlaMetSerArgicuicuigsIgsTyrAspVallcuPheAla 160
                                                                                       161 LeuPheSerLysLeuGluArqThrCysGluLeuIleTyrLeuThrGlnProSerSer 180
                                                                                                                                                                                181 IleSerThrGluIleAsnSerAlaLeuValLeuLysValSerTrpIleThrFheLeuLeu 200
                                                                                                                                                                                                                                                                                                                                  384 1leClySerGlaArgTyrLysLeaClyValArgLeaTyrTyrArgValMetCluSerMet 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        404 LeutysSerGludludlaArqtavySerIleGluAsüFheSerLysLeuLeuAauAapASm 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               424 IlePheHisMetSerLeuLeuAlaCysAlaLeuGluValValMetAlaThrTyrSerArg 443
                  361 CAGAAAAACATAGAAAICAGIGICCAIAAAIICIIIIAAAIITACIAAAAGAAATIGAIAAY 420
                                                                                                                                                                                                                                                                                       541 ATATCTACIGAAATAAATTCTGCAITGGTGCTAAAAGTTTTTTTGGAICACATTTTTATTA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721 ACAGCIGITAIACCCAIIAAIGGIICACCICGAACACCCCAGGGGAGGICAGAACAGGAGI 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 781 GCACGGATAGCAAAACAACTAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAA 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      841 CATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTTCAAAAATTTTTATACCTTTTATG 900
                                                                                                                                                                                                                                                                                                                                                                                                                           244 AsnSerLeuGlyLeuValThrSerAsnGlyLeuProGluValGluAsnLeuScrLysArd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               324 ThrileCinCinicaMetMetilcLeuAshSerAlaSerAspGinProSerGluAshLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        344 IleSerTyrPheAsnAsnCysThrValAsnProLysGluSerIleLeuLysArqValLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      344 AsriledlyTyrTlePheLysGluLysPheAlaLysAlaValGlyGlnGlyGysValGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        304 AsnLeuAspGluGluValAsnValIleProProHisThrProValArqThrValMetAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LysThrLeuGlnThrAspSerIleAspSerPheGluThrGlnArgThrProAr4LysSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 Thr-----GlySer-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       243 -----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                         d
                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>د</u>
د.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
```

500 53 560 620 680 23		040 43 100 160 83 220 03	23 23 340 63 63 750 780
ATGGCCACATATAGCAGA 19 PPOTED TELEMANIVAL 40 THEFFILLE HITTELL FOCATGGALECYSALAGLAGLY FILLE HITTELL HITTELL TTACCAAGCAGAAGGC 10 HITTELL HITTELL HITTELL GATCGAATCATCA THEFFILL HITTELL CATCGAATCATCATCATCA THEFFILL HITTELL CAATCAAGCAGAA 11 CAATCAACAACCAGAA 11 CAATCAACCAGAA 11		MCTATGASPATCHISTO 20 MCTATGASPATCHISTO 6 HIGH HIGH HILL 6 TAGAGACATTIC 2 TAGAGATI PASPLOLISTS 6 LYSASTI LOASPLOLISTS 6 TAGAGATI HILL HILL HILL TAGAGATI HILL HILL HILL TAGAGATI TAGAGATI TAGA 2 THE HILL HILL HILL TAGAGAGATI TAGA 2 THE AGAGAGATI TAGA 3 THE HILL HILL HILL TAGAGAGAGATI TAGA 4 THE HILL HILL HILL TAGAGAGAGATI TAGA 4 THE HILL HILL HILL TAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG	Argeofectherset 7
616666101646611610 1017 11 11 11 11 11 11 11	TATACYSP FOLE-ASSILE-CONTROLL OF THE PROPERTY	CCLICATOLISMICACION OCTHASHOLITYCO INCO CCACACALLEGIAL HITLI CCACACALLEGIAL HITLI CLAIGCCALALCCACACIC CLAICCCALACICACACIC CLAILLI	eleughtyphasethr Hillidilililili Hillidililililil erofythysheproser Cottacadatticeradi ecelhasethililili elilililililililili ecelhasethililililililililililililililililililil
TTEATATATATATATATATATATATATATATATATATAT	Prothrasplistenshase transfer that the transfer	Language Language	4 Met Glanza de la Caracteria de la Cara
444 ATE 1501 AGE 1501 AGE 1501 AGE 1501 AGE 1501 AGE 1501 AGE 1502 AGE 1502 AGE 1503	524 619 1141 634 544 the 1801 ACI 564 AT4 564 PT0 584 PT0 694 PT0 604 AT4	624 1119 624 1119 2041 1033 644 Asp 111 2101 0Ac 664 Ard 684 Ard 2221 0511	704 Men 1111 2281 A165 2181 A16 218 219 COA 618 2401 608 2401 A17 A17 A17 A17 A17 A17 A17 A17 A17 A1
	3 8 5 8 5 8 5 8 5 8 5 1		

```
4586 bp. Inn. linear FAL 18 FEB-1993
H.sapiens DNA for 4.6 Kb retinoblasiona qene probe.
A01444
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Funda V.K.T., TANIGA. Murphree L.A. and Remedict, W.F.
A method for detecting the predisposition to retinoblastoma and a
method for detecting a retinoblastoma gene in tumors using a
                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eufeleostomi;
Mammalia; Eufberia; Primates; Catarrhini; Hominidae; Homo.
                 2701 CTGGCAGAAATGACTTCTACTCGAACACGAAAAGCAAAAAGCAGAAAATGAAATGATGCATG 2760
                                                                                                                            844 LeualachuMotThrSerthrArqthrArqMotGlubyschingsMotAsnaspSeruArt 863 [HTHTHTHTHTHTHTHTHTHTHTHTHTHTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      804 ArgSerAlaGluGlySerAsuProProLySProLeuLysLysLeuArgFueAspilleGlu 823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46 ArqLeuGluPheGluGluThrGluGluProAspPheThrAlaLeuCysGlnLysLeuLyg 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            66 HeProAspHisValArgGluArgAlaTrpLouthrTrpStuLysValSerSerValAsp 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6 ProAiglySThrAlaAlaThrAlaAlaAlaAlaAlaAlaAlaCluProProAlaIroProPro 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26 ProProProCluGluAspProGluGluAspSerOlyProGluAspLeuProLeuVal 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xret="taxon:9606"
a 840 c 811 q 1451 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               retinoblastoma gene probe
Patent: EP 0293266-A 1 30 NoV-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lenath:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESEARCH DEVELOPMENT FOUNDALION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-026-459A-49 (1-871) x A01444 (1-458U)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualitiers
                                                                                                                                                                                                                2761 GATACTCAAACAAGGAAGAAA 2784
                                                                                                                                                                                             864 AspThrSerAsnLysGluGluLys 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.416-299
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 4580)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4302.50
92.74%
92.52%
95.52%
                                                                                                                                                                                                                                                                                                                                             A01444.1 GI:345125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . .4580
                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Hest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                               RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL.
                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRIGIN
 ŝ
                                                                                           q
                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ã
                                                              ó
                                                                                                                               ò
                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ō
```

106 AlaAlaValAspLeuAspGluMetSerPheThrFthrGluLeuGinLysAsm11eGlu 125

Tue Jan 21 10:04:35 2003

۾	40.2	GABGARI GACCIAGATORIA DE LE COLOR DE LA COLOR DEL COLOR DE LA COLOR DE LA COLOR DEL COLOR DE LA COLOR DEL COLOR DE LA COLOR DE LA COLOR DE LA COLOR DE LA COLOR DE LA COLOR DEL COLOR DE LA COLOR DEL COLOR DE LA COLOR DEL LA COLOR DEL COLOR DE LA COLOR DE LA COLOR DE LA COLOR DE LA C	361
> a	126	ILESETVALBISLYSPHEPheAsnLeuLeuLysGlulleAspThrSerThrLysValAsp 	145
>- <u>-</u> 2	146	ASDATABLE SCEARGLEGISSISTYFASPVALLEUPECATALCUPESCELYSICU	165 481
> Q	116	GLUAFGIBECYSGLULGULLETYFLGULFFGIBPFOSETSEFSEFTLESSETTHFGTULLE TITTLITTLITTLITTLITTLITTLITTLITTLITTLIT	185 541
5× - ₽	186 542	AsnseralaLeuValLeuLysValSerTrpIleThrPheLeuLeuAlaLysGlyGluVal 	205 601
į, g	2005	LeuchemeteluaspaspleuvallieserPhechnieumetieucysvalleuaspfyr 	225 661
≽ ē	425	The LetysleuserProProMetLeuLoulysGluProfyrLysThr	241
Э. Д	747	GLysel	243
<u>></u>	£.		243
۵	7 # 5	SAACTAGAAAATGATACAAGAATTATTGAAATTCTCTGTAAAGGACATGAATGTAATATA	841
ی ہ	244 442	SATGARCHGAAAAATG1 F1A1TTCAAAAAFTTTTAFACCFTTTTATGAAFTTCTGAGACTTT	248 901
э. a	77	ValThreserAsnGlyLeuProGluValGluAsnLeuSerLysArqTyrGluGluTleTyr 	268 961
14 .4	24.2	GentysAspiysAspix-aAspAldArqix-uPhelxeuAspHisAspiysThrieuGlnThr 	288 1021
μ:	6.87 22.1	- ASPSCETTLEASPSCEPPEGTUTHEGTATHPPOARGLySSCFASOLGUASPGTUGTU- 	308 1081
يے ہد	ter3	ValAsnVallieProProfitsThrProValArgThrValMetAsnThrIleGlnGlnLeu 	328
हेन हो	11.42	MetMet I LetcuAsinSerATaSerAspGlinFroSerGlinAsinLeuTLeSerTyrPheAsin	348 1201
t⊷ ⊋	6 7	- ASDCYSTEVATASDPFOLYSGLUSCELLCLOULYSARGVALLYSASPELCCLYTYFELE 	368 1261
i. g	1.26.2	 WebpystlitysPhealalysalavalOtySholysysValotatiesDyserGlnarg 388	388 1320
्ष इ	1421	TYTESTOUGLYVATATGLOUTYTTYTATGVALMOEGIUSETMETELLOUTYSSETGLUGU TELLETTITTITTITTITTITTITTITTITTITTITTITTITTI	408 1380
≥-	404	GluarqizusertieGinasnPheSeriysteul.euasnaspasnilePheHisMetSeriidiliiliiliiliiliiliiliiliiliiliiliilii	428

QCI	1381	GAACGATTATCCATTCAAAATTTTAGCAAACTTCTGAATGACAACATTTTTCATATGT6T	144
ò,	429	LeuleuAladysAlaleuGluValValMetAlaThrTyrSerAraSerThrSerGluAsn	448
qq	1441	TTATTGGTGTGTGTTTTGAGGTTGTAALGGCCACATATAGCAGAAGTACATCTCAGAAT	1500
ΟY	449	LeuAspSerGlyThrAspLeuSerPheProTrp1 el.euAsnValLeuAsnLeulysAla	468
qq	1501	CTGATTCAGGACAGATTGTCTTTGCCATGGATTCTGAATGTGCTTAATTTAAAAGC	1560
40	697	PheAspPheTyrtysValIleSt.SerPheIleL,	488
qu	1561	TETTGATTTTTACAAAGTGATCGAAAGTTTTATCAAAGCAGAAGGCAACTTGACAAGAAA	1620
ç d	489 1621	MettleCysHtsLeadtangCysSluHtsArglleMetSluSerLeadlatrFleuser 	508 1680
Q	509	AspSerProtouPheAspLoutleLysCinSerLysAspArgCluClyProthrAspHis	п. С1 90
QD	1681		1740
ô	529	LeuGlüSerAlaCysProLeüAsnLeüProLeuGlüAsnAsnHisThrAlaAlaAspMet	548
q	1741	CITTGATTITITITITITITITITITITITITITITITITI	1800
, oy	549	TyrLeuSerProValArqScrProLysLysLysOlySerThrThrArqValAsnSerThr	568
d d	1801	TATCITICTOCTGIAAGATOTOCAAAGAAAAAAAGGITOAACTAYGOGTGIAAAIICIACI	1860
, Q.	569	569 AlaAsnAlaGlufhrGlnAlaThrSerAlaPheGlnThrGlnLysProLeatysSerThr 588 [HTT] [HT] [H	588
i .	- C	STANDARD MANAGER MANAGEMENT TO THE TRANSPORT OF THE TRANS) 21 0 51 0
à â	1921	SCELEGROCE BRITTER TELYS LYSA EL TYRA GEGRALD EN TERMA GEGRANDELEN. THE HELLE THE TELLE THE THE TELLE THE THE TELLE THE TELLE THE TELLE THE TELLE THE TELLE THE TELLE THE THE TELLE THE TELLE THE TELLE THE TELLE THE TELLE THE TELLE THE THE TELLE THE TELLE THE TELLE THE TELLE THE TELLE THE TELLE THE THE TELLE THE TELLE THE TELLE THE TELLE THE TELLE THE TELLE THE THE TELLE THE TELLE THE TELLE THE TELLE THE TELLE THE TELLE THE THE TELLE THE TELLE THE TELLE THE TELLE THE TELLE THE TELLE THE THE TELLE THE TELLE THE TELLE THE TELLE THE TELLE THE TELLE THE THE TELLE THE THE TELLE THE THE THE THE THE THE THE THE THE TH	5.8 1480
ò	609	cysGluArqLeuLeuSerGluHisProGluLeuGluHisIleIleIrpThrLeuPheGlu	628
qq	1981	TGTGAACGCCTTCTGTGTGTGTGTGTGTGTGTGTGTGTGT	2040
Oy	629	HisThricuGinAsnGluTyrGluLcuMctArgAspArgHisLeuAspGlnllcMctMct	648
qq	2041	CACACCCTGCAGAATGAGTATGAACTCATGAGAGACAGGATTTGGACCAAATTATGATG	2100
δλ	649	CyaSerMetTyrGlyfleCystysValtycAcmilcAspleuLysBetyslleIleVal	899
qα	2101	TGTTCCATGTATGCCATATGCAAAGTCAAGATATAGACCTTAAATTCAAAATCATTGTA	2160
ζō	669	ThralaTyrLysAspLeaProHisAlaValGlaGlaIhrPheLysArqValLeuIleLys	688
췯	2161	ACAGEATACAAGATCTTCCTCATGCTGTTCAGGACATTCAAACGTTTTGATCAAA	2220
Ç.	689	GlodioGlodiyi AspSertie Heval Phetyt AsnSerVa i PheMetGluArgicoultys	3 û B
Db	c.:	GANGAGGAGTATGATTATAGTGTTCTATAAGTGGGTGTTGATGGAGAGTGGAAA	2280
ô	709	ThrAsnileLeuGlnTyrAlaSerThrArqProProThrLeuSerProIleProHisIle	728
ąg	2281	ACAAATITITITITITITITITITITITITITITITITIT	2339
6.5	729	ProArgSerProTyrLysEbeProSerSerFroLeuAralleProGlyGlyAsulleTyr	748
CI _C	2340	octosaasporttavaasttisctasttoacettavasatteetssassaattita	5368
O_I	749	H. Ger ProbadysSer Progratys (TeSer Chucky bask Profiber of that yawet	768
qq	2400	ATTICAPOCCIGAAGAGTOCATATAAATTICAGAAGSTOTGCCAACACAAAATG	2459
'o	769	######################################	788
qu	2460	ACTOCAAGATOTAGAATOTTAGAATTGGTGAATTATTGGGGGACTTGTGAGAAGTTG	2519

```
linear PAT 27-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 4591)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                789 STRLIYST FOASINST MALTYSASINSET ASPATIQUITYSATIGSET ALAGTIIGTY | 808
                                                                809 SerAshProProJySProLeutysLySLenArqPbeAsp11eG1uG1ySerAspG1uA1a 828
                                                                                                                                829 AspolyserLysHistonErodlyshuserLysPhachnolnlystonAlachuMerThr 848
                                                                                                                                                                                                    84% SerihrArqihrArqmetGinLysGinLysMetAsnAspSerMetAspIhrSerAsnLys 868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KOBATASHI MASATURI, YAMAOTHI YORIBA, IANABA AKIRO DG
SJOOGYAN BERIJAN ANIKANJOON (MISANISYON/CIZKIINS) GC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14 Toesto and The Billing W. and The X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /orqanism-'Mus musculus'
                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION COMM encoding Rb (retinoblastoma) protein.
ACCESSION E12560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99. .2864
/product:'Rb protein'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHIAND KANAYO SANGYO GLODISU KENAYU KIAO
OS Mus musculus (mouse)
PN JP 1997023884 A/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/pualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fobygashi,M., Yamaréhi,Y. and Tanaka,A.
ANTISENSE RNA EXPRESSING VECTOR
Putent: JP 1997023884-A 1 28-JAN-1997;
                                                                                                                                                                                                                                                                                                                                                                          - NA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            898 4 1329 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zordanism "Mus musculus"
Zdb xret-"taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2865. .4591.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    : Sdpt)
                                                                                                                                                                                                                                                                                                                                                                         4591 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14 JUL 1995 JP 1995177741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 topology: Linear;
hypothetical: No;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   strandedness: bomble;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5.450 281
                                                                                                                                                                                                                                                                                                                                                                                                                         E12560.1 -31:3251392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     anti seuser Nor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4044.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88,90%
84,48%
89,35%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .1 696
                                                                                                                                                                                                                                                                                                                                                                                                                                           JF 1997023884 A/1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               76.61 NAT 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus.
Mus musculus
                                                                                                                                                                                                                                                                                                      2750 GARGAGAN 2758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                    869 Chuthulys 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5.7.11R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1395 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ke.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ~12N15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                         E12560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OH DES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           URGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Prind. No.:
                                                                                                                                                                                                                                                                                                                                       RESULF 15
E12560
                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               I HIRNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NETO IN
                              Ē
                                                                  S
                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                      :5
```

US 09 026 459A 49 (1 871) x EL2560 (1-4591)

```
481 AATTCACTTGGAATTGTALCATCTAATGGACTTCAGAGGTTGAAAG1CTTTCTAAACGC 1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        244 AsinSerticusOpticusMalibriserAsinStytenProstavalsdavanicasara 263 HTHHHHHHHHH
                                                                                                                                                                                                                                                                                             HT HTHHHHHHHHH HTTE HTTE FOR STORE FOR STORE FOR STORE AND PROBA AND STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STORE STO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81 ValSerSerValAspGlyValLenGlyGlyTlyrlleGlnLysLysLysGlnLenTrpGly 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        [01] IleCysIlePhelleAlaAlaValAspLeuAspGluMetSerPheThrFheThuGluLeu 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        441 CAGAAAAGCAFAGAAACCAGGTGTCTATAAATTCTTTGACTTATAAAAGAAAATCGATACC 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              141 SerThrLysValAspAsnAlaMetSerArqLeuLeuLysLysTyrAspValLeuPheAla 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             161 LeuPheSertysLeuGluArqThrCysCluLeuIleTyrLeuThrGluProSerSer 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 HeSerthrGluffeAsnSerAlaLeuValLeuLysValSerTrpflethrPheLeuLeu 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            201 AlatysClyCluVallowStaMetSlaAspAsplauVallteSerPhesDatenMettes 220 http://doi.org/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016/10.1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                68] GCTAAAGGAGAAGTATTACAGATGGAAGATGACGTGGTAATCTCATTTCAGCTAATGTTG 740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22] /ysValLeuAspTyrPhelleLysLeuSerProFroMetlædfeuLysTlubtoTyrLys 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        861 GCTCGGATAGCAAAACAACTAGAAAATGATAAAGAGATTAFCGAGGTFCTCTGTAAAGAA 920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421 CACGAGTGTAATATAGAIGAGGGGAAAAAIGIIIAITICAAAAATIITAICCTIIIIAIA 980
                                                                                                                  THE GOVERNMENT PARTY 140
                                                                                                                                                                                                                                    21 ProAlaProProProProProProGluGluAspProGluGluAspScrGlyProGlu 40
1 Met ProProtyStlm ProArqlyStlm AlaAlaAlaAlaAlaAlaAlaGlmPro 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 CysGlnLysLenLysTleProAspHisValArgGluArgAlaTrpLenThrTrpGluLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   [2] GlnLysAsnfleGluffeSerValHisLysPhePheAsnLeuLeulysGluffeAspfhr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        284 LysThrLeuGlnThrAspSerIleAspSerPheGluThrGluArqThrProArqLysSer
                                                                     241 ThrdlySer -----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>2</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;<del>-</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
```

U 1 4	1280 363 1340	383 1400	4 03 1460	423 1520	443 ราคิก	463 1640	483 1700	503 1760	523 1820	543 1877	563 1937	583 1997	603 2057	623 2117	643 2177	663 2237	683
	ACTALICAACAATTAATGGTGATTTTAAATTGTGCAAGTGATGGCATGAGAAATG IleSelTyrPheAsnAsnCysThrValAsnFroLysGluSerIleLeuLysArqValL 	Aspilediyiy : LebelysStulys ::: ::	I] #41 y % nertleargfyelysterolyValarglebyyttyrargvalMetGli 	LeulysserdludludluArgleuserlledlnAsnPheSe 	TechedismetSerlicul.cualacysAlalicuGluvalValmetAlaThTTYFS 	SecThriserGlinAspleuAspiserGlyThrAspleuSerPheProTrp11	Tenashi eniysalaPheaspPhetyr 	Asulcuthrargelumet Helyshisleugluargeyseluhisarg Hemele 	LeudlaIrpLeuSerAspSerProLeuPheAspLeuIleLy	GIVPEOTHERSPHISLERGIUSERAIGPySPEOLOGASHEUPFOLOGAIDAASAA 	Thralaalaaspwetfyrleuserprovalargserprolystystystystystyferthire 	1 ArgValAsnSerT 	ProteutysserI 	ArgicuashThricuCysGluargiculeuSerGluHisProGluLeuGluHisil 	4 TrpThile-uPhedinHisThile-uGinAsmaluTyrdiuLe-uMetArqAspArqHi 	4 AspolatieMetMotO, aserMetI, 101, IleC, sLysVall, sAsal 	4 + Phelys1!c1lcvalThrAlalTyrLysAspt.cuProHisAlaValClnCluThrPhelys
1161	1221 344 1281	36.5	70.1	404	424	444	464	484 1701	504	524 1821	544	564	584 1998	504 2058	624	*# P	∳ (j. y
ਤੇ ਜ਼ੈ ਤੇ	e 6 e	9 8	5 출	S 8	C C C	5 3	å å	Oy Sp	§ 8	5 f	5 3	5 g	ć 93	cy Db	§ 3	S qu	5

```
684 ArgValLeuThetysGlusbudhyfyrAspSerIleIleValPheryrAspSerValPhe 703 HILLHILHHILHHILHHILH 2298 CCICTTTTCATCAGAGAGAGAGTTGATTCATTATAGTTTCTATAGTTTCCATTATAGTTTCTATAGTTTCC 2357
                                                                2537
                                                                                                                                                                                        2538 ACACCCACAAAAATGACPOOGAGATCAAGAATCTGATCTCAATTGGTGATCATTTGGG 2597
                                                                                                                                                                                                                    763
                                                                                                                                                                                764 ThrProThrLysMctThrProArgScrArgllcLeuValScrIleClyGluSerPheGly 783
                                                                                                                                                                                                                                                                                                                                    844 LeuAlaCluMetThrSerThrArgThrArgMetGlnLysGlnLysMetAshAspSerMet 863
                                                                                                                                          2238 TECAAAATCATCGCCACCTGCCTACAAGATCTTCCTCACGCTGCCCAGGACCTTAAA
                                                                                                                                                                                                                                                                                                                                                                                      2838 GATGTCTCAAACAAGGAGAAAG 2861
                                                                                                                                                                                                                                                                                                                                                                         864 AspThrSerAsnLysGluGluLys 871
                          ې <del>- ا</del>
                                                                ΟŊ
                                                                                 g
                                                                                                                     D.
                                                                                                                                                            QQ
                                                                                                                                                                                _{\Sigma}^{\mathrm{O}}
                                                                                                                                                                                                g
                                                                                                                                                                                                                                      QΠ
                                                                                                                                                                                                                                                                            qq
                                                                                                      Οy
                                                                                                                                         ç
                                                                                                                                                                                                                     QΫ́
                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                         ô
```

Search completed: January 18, 2003, 22:32:21 Job time : 3916.94 secs

```
Copyright (c) 1993 - 2003 Compugen Ltd.
GenCore version 5.1 3
```

nucleic search, using sw model M nucleic January 16, 2903, 15:20:22 Кип оп:

Search time 1913 86 seronds (without alignments) 18469.506 Million cell updates/see

US 09:026 459A 48 Litte: Pertect score:

1 CGCGTCATGCCGCCCAAAAC......AAATGAGGATTATTGATAGT 3323

Sequences

Gapop 10.0 , Gapevit 1.0 DENTITY NOC Scoring table;

42 4081 42 lotal number of hits satisfying chosen parameters:

16154056 seqs, 8097743476 residues

Maximum bb seq length: 2000000000 Minimum DB Seq length: 0

Fost processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Latabase :

em_esthum:* em_estpl:*
em_estro:*
em_htc:* qb_bst2:* qb_bto:* om_estin.* om_estmu:* qb_est4:* em estba:* om_estov:* qb est4:* qb esst 5:* qb, estl:* ESI:

em_qss.other:* em das inv:* em 455 mam:* em_455_mus:* em_dss_pro:* em dss hum:* em gss fun:* em gss vit:* em_estam:* db dss:*

em_esttun:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Soulte

FEATURES

∢	MA45.524 AGENOOMRT HER859 G0.3492.340 HES9228 G0106.3567 HAG16.219 G0.2644717 HM244009 iq.34108.x HE082846 HC2 HT064 AMSH318 iallh64	E	AW5R2967 (2008) A AL692790 (BKP2p3131 A) (2014) (BK	AWSOZBRZ UT HE BNU RELEGOVS OVA HTGS] RINATITIS GOVO SSMI HMA GAZE A ASIRVOURI RESAGNA NCT HTGSA ALOVZES QUODAGOZIX ALSPRASE BREZO I SF REHGS749 GOLGZEL ALSPRASE BREZO I SF REHGS749 GOLGZEL ALSPRASE BREZO I SF
13 100/45881 34 20/2813 14 80/20/213 12 RG6/00/601 12 RG5/00/60 13 100/66/194	13 BM463724 13 BE66839 10 BE683927 12 BG516219 13 BM264609 10 BE082846	4 44 4		<< <
244 244 244 244 244 244 244 244 244 244			(ឧក្ខេត្តព្រះក្រុកពេល ទោកក្រុងទាក់ក្រុង (ស្វាប្រក្នុងទាំក្រុ	
\$ 8 7 1 0 8 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	18.2 17.3 17.5 17.3 16.0	<u>ក្រសួលបញ្ជាប់</u> ភ្លៃស្រួលបញ្ជាក់ ទៀលស្គង់គំនាល់ក	444442883876 666644833876
7752.4 7256.4 699.6 698.2 691.2	678 660 641.6 642.2 617 617 605.2	596.4 580 575.2 556.4 558	5330 530 501 501 501 501 501 501 501 501 501 50	484.4 481.4 480.2 476.6 474.4 459.2 457 457
2 8 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	16 16 18 19 20	22 24 25 24 25 25	1444455 148504445	**************************************
ម			e C	0 0 0

ALIGNMENTS

BM450031 1023 bp mRNA iincar ESI of FEB 200.2 AGENCOGRI-6393544 NIH_MGC_72 Homo sapiens chNA clone IMAGE:55,28007 Homo sapiens
Bukaryola; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (Dases 1 to 1023)
NIH-MGC http://mqc.ncl.nih.qov/. National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999) Contact: Robert Strausberg, Ph.D. Email: cqapbs-remail.nib.gov Tissue Proeurement: AFC/JRCHD/DLP BM450031.1 GI:18499071 5', mRNA sequence. BM450031 human. DEFINITION ORGANISM ACCESSION AUTHORS JOURNAL REFERENCE KEYWORDS RESULT 1 BM450031 TITE VERSION COMMENT SOURCE 1.0008

```
ω
•
                                                                                                                                                           Zlab_host="DHIOH (phage-resistant)"
South="Grade Skin, Vector paww Sworth Site_1, Noti:
Site_2: Sall; Cloned unidirectionally, Primer: Oligo dT.
Average inser' size 2 &b. Library constructed by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  [3]] ÇAAAĞIGAAĞATATAĞACCITAAATFCAAAATCATTGTAAARAKAAAAGGATCTTGÇ 1970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2091 TICCANCAGGCCCCTACCTIGICACCAATACCTGAGATTGGTGGAAGGGTTTAGAAGTT 2150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2571 GGACCT FOR FOR PARTECIES ACAD TOTOGATTICATING TOTOGAT CAPETICAL 2639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1971 ICATGOTGITOAGGAGAGAOATTOAAAOGGTGITTIGAICAAAGAAGAAGAAGAAGAIATGIAI 2030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2151 TCCTAGTTCACCTTACGGATTCCPGGAGAGACATCTAIATFICACCCTGAAGAGTCC 2210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2271 AGTATGAALIGGTGAATCAFTCGGGACFFCFGAGAAGTFCCAGAAAATAAATCAGAFGGF 2330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2451 AGMANAUTOPAATTITOAGAGAAATTGGAGAAATGAGIITGTAGTIGGAAGAGGAATGGA 2510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2631 TAACLILIGGGAGGTTCFGFTTTALGGGCACAFTFTAATGFFCAGCFGFFFFFFFFFFGFGGATAT 2690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2691 AAAAIGIGGAGAAIGGAAIIGITI--GGGTGATIGAITGTAAGGGTIGAAAIGIIAGIGAIGAI 2748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2531 TATAGIALHETATAACTEGGELETHEATGGAGAGGAGAAAAAAATATTTTGGAALAFGA 2890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22.1. KIAFAAA FIFOAGAAGTETETETETAAFAAAAAAAAAAGAGAGAGAAGAAGAAGAAGAAFTEF 2270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 INTACH HILLIH HILIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OF ATATAAATTTCAGAAGGTCTGCCAACAACAAAAATGACCCAAGAAGATCT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421 ALGIAANANGANGGGTGTGAAAAGAAGTGCTGAAGGAAGCAAGCGTGGTAAAGCACI 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               I CAAAGIGAAGAAFAFAGACCITAAAFFCAAAATGATTGTAACAAGAAFATTTTG KN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 13; Length 1023;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                             /clone_lib="NIB_MGC_72"
/fissor type "delamo" is melamenta"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0, Mismatches 43,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 910.2; DB 13, Pred No 3 9e-168;
                                                                                                                                                                                                                                                                                        Average inser' size 2 kb
Technologies."
                                                                                                                                                                                                                                                                                                                                                                              281 t.
                                      /cloue="IMAGE:5528037"
/db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                              197 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27.48;
95.24;
                                                                                                                                                                                                                                                                                                                                                                                  211 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                              314 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unery Match
                                                                                                                                                                                                                                                                                                                                                                         MASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mat Class
                                                                                                                                                                                                                                                                                                                                                                                                                     Σ.
Σ.
Σ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \dot{z}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>2</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>...</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \geq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
```

```
/note="Organ: eye; Vector: pGMV-SPORT6; Site_1: Not1: Site_2: Sall, Gloncd unid:rectionally. Primer: Olido dT. Average insert size 1.75 kb. Library constructed by Life Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RMS610R3 AMD 1951 EP mPNA linear ESI 20-FEB-2002 AGENCOURT_6566133 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:5550905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota, Metazda: Chordata; Craniata; Vertebrata; Edteleootomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                1089 AAAAFISHAFAAAAAAGATTGTGTGAAAATTGGATGACGATAGAAAGTTGGAAGTTGGA 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1189 AATHTHAGGAAACHTGICAAFGAACAITTIIGALATGTGTGTTATIGGGGGGGGGTTT 1248
2749 CHTAITTATACAAGAITTCAAATCTTGIGTAAATGCTGCGATTTAAAAAAGTTGTAGGAG 2808
                                                                                                                                                                            1129 TTGTATTACCGAGTAATGGAATCCATGCTTAAATCAGAAGAAGAAGATTATGGATTCAA 1188
                                                                                                                                                                                                                 | HITH | HITHIT | HITHIT | HITHIT | HIT | HITH | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT | HITHIT |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      chwa Library Preparation: Life Technologies, Inc. CHR. Harary Arrayed by. The L.M.A.C.E. Consortium (LLML) DNA Sequencing by: Appropure Bussiciance Corporation Clone distribution. MGC clone distribution information can be tound through the LLM.A.G.E. Consortium/LLML at:
                                        NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      84F2 - 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 909.4; DB 13; Length 1051; Pred. No. 5.5e-168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /lab_host="DH10B (phage=resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type-"retinoblastoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        http://imagé.llnl.gov
Plate: LLAM12263 row: m column: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone-"IMAGE:5550905"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /elone_lib-"nih_mgg_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                197 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tissue Procurement: AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BM561083.1 GT:18806043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27.4%;
98.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 1051)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     221 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5', mRNA sequence.
BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                330 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2925 A 2925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1021 A 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
8 € 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 2
BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ô
                                                                                                                                                                                                                                                                                                                                                                                                                                           CP
CP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    č
                                                                                                                                                                                                                                                                   Ē
```

```
1249 GAGGTTGTAATGGCCACATATAGCAGAAGTACATCTGAGAATCTTGATTCTGGAACAGAT 1308
                                                                                                     1309 FEGETELECCATOSATICTGAA FGEGGTTAATTEAAAAGCCITTICATTETACAAAGTG 1368
                                                                                                                                                                              469 AFGGAAAGTTTTATGAAAGGAGGAACTTGACAAGAAAATGATAAAACATTTAGAA 1428
                                                                                                                                                                                                                                                      1429 CGATGTGAACATCGAATCATGGAATCCCTTGCATGGCTCTCAGATTCACTTTATTTGAT 1488
                                                                                                                                                                                                                                                                                                                               489 CHIAITAAAQAAFCAAAGGACCAGAGAAGGACCAACTGATCACCTTGAATCTGCTTGTCCT 1548
                                                                                                                                                                                                                                                                                                                                                                                                    1549 CITAATCITCCTCCCAGAATAATCACACTGCAGCAGATATGTATCTTCTCCTGTAAGA 1608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (6.09) TCTCCTAAAAAAAAAAAAAGATTCAACTACGCGTGTAAATTCTACTGCAAAATGCAGAGACACAA 1668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1669 GCAACCICAGCCTTGCAGACCCAGAAGCCATTGAAATCTACCTCTCTTTTCACTGTTTTAT 1728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1729 AAAAAAGIGTATGAGGTAAGGTATGTGGGGTAAATAGAGTTGGGAAGGGGTGTGTGTGT 1788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1789 GAGCACCCAGAATTAGAACATAFCATCTGGACCCTTTCCCAGCACACCCTGCAGAATGAG 1848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1909 TOWAAAGTGAAGAATATAGACCTTAA ATTCAAAATCATTGTAACAGCATACAAGGATCT 1967
                                                                                                                                                                                                    241 FEGETITICCCATGGATTCTGAATGTGCTTAATTTAAAAGCCTTTGATTTTACAAAGGG 300
                                                                                                                                                                                                                                                                         421 CTFATTAAASAATCAAAGGACCGAGAAGGACCAACTGATCACCTTGAATCTGCTTGTGTCT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                        481 CTTAATCTTGCTCTCCAGAATAATCACACAGCAGCAGATATGTATCTTTGTCTGAGA 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              721 GAGGACCCAGAATTAGAACATATCATCATGTAGCTTTTCCAGCACCCTGCAGAATGAG 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          781 TAFGAACTCATGAGAGAGAGAANTTTGGACCAAATATGATGTGTTCCATGTATGGCATA 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1968 FOUTCATGOTGTTCAGGAGACATTCAAACGTGT-TTTGATCAAAGAAGAGGAG 2019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                       5
                                                                                                                                        Ĩ
                                                                                                                                                                                Š
                                                                                                                                                                                                                 \frac{2}{2}
                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                           ÷
                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                      Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
```

```
#04 (922)
AGENCHURT,7765562 NIH_MGC_92 Homo sapiens cDNA clone IMAGE:6015480
                                                                                                                                                                                                           Eukaryola; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria: Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                 National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                            Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                           NIH-MGC http://mgc.uci.nih.gov/
                                                                                                                           HO4 19221.1 G1:21178297
                                                                                                                                                                                                                                                       (bases 1 to 1081)
                                                                                                                                                                                                                                                                                                                     Unpublished (1999)
                                                                                      , mKNA sequence.
                                                                                                                                                                                            Homo sapiens
                                                                                                        HO4 39221
                                                                                                                                                                          human.
                                                                                                                                                    ESI
                                                             DEFINITION
                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                        ACCESSION
                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                     JOHN NAL.
PESULT 3
BQ4 19221
                                                                                                                                               KEYWORDS
                                                                                                                                VERS LON
                                                                                                                                                                                                                                                                                                                                         LNEWWOOL
                                                                                                                                                                   SOURCE
                                            50,67
```

Email: eqapbs ramail.nih.gov

```
·.
                                                                                                                                                                                                                                                                    /tissue_lype="embryonal carcinoma, rell line"
/lab_host."DH10B (phage=resistant)"
/note='Grgan: testis; Vecto: pr@W SW Rrf6: Site_1: Not1;
Site_2: Sall; Cloned unidirectionally; oligo dT primed.
Average insert size 2.5 kb. Library enriched for
full-length clones and constructed by Life Technologies.
Note: this is a NH_MSC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2425 GAAGCAGATGGAAGTAAACATCTCCCAGGAGAGTCCAAATTTTGAGCAGAATTGGCAGAA 2484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2605 CATTGTCTCTCACAGATGTGACTGTATAACTTTCCCAGGTTCTGTTTATGGCAATTTA 2664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2725 AAGCCACTTGAAATGTTAGTCATTGTTATTATAGAAGATTGAAAATCTTGTGTAAATGC 2784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2845 IGGATAGTAAGAATGGCCCTAGAGTGGGAGTCCTGATAACCCAGGCCTGTGTGTACTT 2904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDNA Library Proparation: Life rechnologies, Inc.
CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2665 ATATCTTCAGCTCTTTTGTGGATATAAAATGTGCAGATGCAAATTGTTTGGGTGATTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2785 TIGGCATITITAAAAAGITIGTAGCAGATTGITITIGGTGTTGGAAAGITAAAATTGCTGTGTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3025 TTTGATTGACTGCCCATTCACCAAAATTATCCTGAACTCTTCTGCAAAAATGATATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301 AAGCCACTEGAAATGITAGICATIGITATITATACAAGAITGAAAATCITGIGAAAATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                          25.8%; Score 856; DH 14; Longth 1081; 99.1%; Pred. No. 1.6e-157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                       http://image.llnl.gov
Plate: LLAM13211 row: k column: 01
                                                                                                                                                                                               /organism-"Homo sapiens"
                                                                                                                                                                                                                                                   /clone_lib-"NIH_MGC_92"
                                                                                                                                           High quality sequence stop: 732.
                                                                                                                                                                                                                                   /clone-"IMAGE:6015480"
                                                                                                                                                                                                                /db_xref-"taxon:9606"
                                                                                                                                                            Location/Qualitiers
lissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 892; Conservative
                                                                                                                                                                                .1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                Source
                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ċ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ôχ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     òλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
```

```
9
                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ç.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         â
                                                            â
                                                                                                                                                                              a
                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                      ó
                                                                                                                                                                                                                                                                                                                                                                                     ã
                                                                                                                                                                                                                                                                                                                                                                                                                         d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                               BG22CC7*
AdENY GRI_7572621 RIB_M3C_92 Homo saplens cDNA clone IMAGE.6044522
5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             //oute="order testis," Vector: pcMV SPORT6; Site_1: Not1; Site_2: Sall; Cloned unidirectionally: oligo-dT primed Average issert size 2.5 kb. Library carriered for full-length clones and constructed by Life Technologies Note: this is a NH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Enkaryola, Metazwa, Chordata, Craniata, Vertebrata, Enteleustomi,
Mammalia; Eutheria; Primates; Catarrhini, Hominidae; Homo.
3144 TAGAAATTAGAAAAAATTACTAATTTTAGAGATTTAGATTTTATTTTATTTTAGGAATCT 3144
                                                                             2008 ASTATAANIMATATBATATCATAITACTBAAAGAGATTTCATACCTCAGAATGTAAAA 3264
                                                                                                                                                                                                                                         4265 GAACIIANIGATTATTTTCTTCCAACTTATGTTTTTAAATGA-GGATTATTGATAGT 3323
                  DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be tound through the L.M.A.G.E. Consortium/LINL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 TIAAANICICACCICCCAIGITGCICAAAAAAAAAAAAAAAAAATITIATATATATATA 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      455 TIAAACTETCACCTCCCATGTTGCTCAAAGAAGCAIAIAAAACAGCTGTTAIACCCAIIA 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    515 ATGGTTGAPPTGGAAGACCCAGGGGAGGTCAGAACAGGAATGPAPPGATAAAAAAAAA 574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           95 AAATGGAAGATGATCTGGTGATTTCATTTCAGTTAATGCTATGTGTCCTTGACTATTTTA 454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 881)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2; Saps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The L M A G.E. Consertium (ILNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25.4%; Score 844.8; DH 14; Length 881; 99.0%; Pred, No. 2.5e 155; ive 0; Mismitches 7; Indels 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /Lissue_type-"embryonal carcinoma, cell line"
/lab_host-"DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plate: LLAM13287 row: e column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /orqanism-"Homo sapiens"
/db_xrof-"tavon.9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zelone lib-"NIH MGC 92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="IMAGE:6044522"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bigh quality sequence stop: 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: cqapbs r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                               RU220275.1 GI.20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAT (BASSOC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                             5', mRNA
BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Marchane 871;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cooking Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOUTTOR
                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          · ReJANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE CONT
                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTESSI A
                                                                                                                                                                                                                                                                                                                                                                                                                                                             VICKS COM
KEYWOKOS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOHENAL
                                                                                                                                                                                                                                                                                                                                       RESTEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEATURES
                                                                                                                                                                                                                                                                                                                                                              MU22-275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NICIN
                                                                                                                                                                                                                                                                                                                                                                                     · ·
    3
                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
                                     â
                                                                                                                     څ
```

```
HM47560?
ACENOOUFT_6480007 NIF_MSC_92 Homo sapiens obnA clone IMAGE:5575683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryola, Metasoa, Chordata, Craniata, Vertebrata, Enteledatomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1115 AACTIGGAGITGGGCTTGTATTACGAGTAATGGAATGGATGATAAATGAGAAGAAGAAGAAG 1174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1055 AAGAGAAATTTGCTFAAGGTFGTGGGACAGGGTTGGGAATTGGATGGATGGGTAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     445 - GTATAGHGAAHTTAAAAGAGTATAGTGAAAAGAGTGAAGGGTATAGGATAGGGTTTA 1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          781 GAFIAFCCATFCAAAATFTFAGCAAAGTICIGAA1GACCACATTTTTTCATA1G1CC1111 840
481 ATGTAATTGFFGGGGGGGGGGGGGGGTGTTAIGAAGAGTAFGGAAGAATTAATGA 540
                                                                                                                           181 TAGAAAATGATAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATAGALG 240
                                                                                                                                                                                                                                   241 AGGIGAAAAAIGITIATIICAAAAAIITIAIACCITIITAIGAAIICICIIGGACIIGIAA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                              361 AAAATAAAGATCTAGAIGCAAGATTAITTTGGAITCATGAIAAAACTCTTCAGACTGAII 420
                                                                         575 TAGAAAATGATACAAGAATTATTGAAGTICICIGIAAAGAACAIGAATGIAATATAAATU 634
                                                                                                                                                                               635 AGGIGAAAAAIGITTATTTCAAAAAITTTATACCITTITAIGAATTCTCIIGGACTIGIAA 694
                                                                                                                                                                                                                                                                                    755 AAAATAAAGATCTAGATGCAAGATTATTTTTGGATCATGATAAAACTCTTGAGACTGATT 814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  815 DIATAGADAS LI GAAAGAGAGAGAGASGAGAAAAAS, AAGGTGATGAAGAGGGGGA 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       875 ATGLAATTGGTGGAGAGACTGGAGTTAGGAGTGTTALGAAGAGTATGGAAGAATTAATGA 934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            935 IGAITIIAAATICAAGAAAGGAACCIICAGAAAATCIGATTICCIATTITAACAACT 994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NIH-MGC http://mgc noi nih gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cDNA Library Preparation: Life Lechnologies, Inc.
                                                                                                                                                                                                             1233 ATPSSCOTSCOSTICITION SACSTESSCOOLATAIAGE 1272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HILLITITITITITITI HILLI HILLITITITITI 841 ATTRGGGGGGGGGGTGTTTGAGTTGTAALAALAGG 880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: cgapbs-r@mail.nih.gov
Tissue Procurement: AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BM475603.1 GI:18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5', mRNA sequence.
BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                naman.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NOTHERMORE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALLE E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      51.001
```

```
/clone_lib="NiH_MOL_92"
//issue_rype="contrioned, cell line"
/lab_host="DBIOB (phage-resistant)"
//orb.host="DBIOB (phage-
                                       Clone distribution: MGC clone distribution information can be tound through the L.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             183 AGAAATTGATACCAAAGGTGATAATGCTATGTCAAGACTGTTGAAGAAGTATGA 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                403 OLOGA GARARAGAGA GARARA AGCAAAACAACI AGAAAA I GALACAAGAA LITATII GAAGA 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              602 TECHTELAAAGAACAEGAALGTAALAFAGAEGAGGEGAAAAATGTTFATTTCAAAAATT 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24.3. TOTA FEGET FEGEROTICET CAGCAAR IT - GGAAAGGACAFGFGAAG FEATATATATET GAGAC 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 / TGTATTGTTTGCACTCTTCAGCAAATTCGGAAAGGACACGTGAACTTATATATTTGACAC 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            102 AACCCASCASTICSALAICIACIGAAAFAAATICIGCATTGGGTGAAAAGTTFCTTGGA 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         462 TCACATTTTATTACTAAAGGGGAAGTATTACAAATGGAAGATGATCTGGTGATTTCAT 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              422 FLOAGTEAALGGGTALGTGLIGAGLALLIALIAAAGTGTGAGGTGGALGTTGGTGA 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           482 AAGAACCATATAAAACAGCIGTTATACCCATTAATGGTTCACCTCGAAGAGGCGAG 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              44.3. AAGAACGA FATTAAAACGOOTOTOTTAA AGGCATTAA I GOTTOGACCTOGAACAGGGGGGG 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 942 GTCAGAACAGGACGCACGCATAGCAAAACAACTAGAAAATGATACAAGAATTATTGAAG 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             464 TTCTCTGTAAAAAACATGAATGTAATATAGATGAAGATGTGTTATATTCAAAAATT 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               662 FTATACCTTTTATGAATTCTCTTTGGACTTGTAAGATCTAATGGACTTCCGAGAGGTTGAAA 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     722 ATCTTTCTAAACGATACGAAAATTTATCTTAAAAATAAAGATCTAGGAGGTTAT 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       782 FTFTGGAFGALGAFAAAGTGTFGAGAGTGGAFTGTATAGAGAGFFFTFGAAAGAGAGAA 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64.4 TTTTGGATCATGATAAAACTCTTCAGACTGATTCTATAGACAGTTTTGAAAACACAGAA 702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    842 PAPOSABABAGIAAPPELISALSAASASSISAATIGIRATITCCTCCACACTCCAGTTTA 901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24.7%; Score 786; DB 13; Length 1001;
DNA Sequencing by: Agencourt Bioscience Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Prod. No. 8, 39-144;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                 Plate: LLAM12326 row: t column: 04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  288 t
                                                                                                                                                                                                                                                                                                                                                                     /orqanism-"Homo sapiens"
                                                                                                                                                                                                    High quality sequence start: 17
High quality sequence stop: 744.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zelone-*IMAGE:5575684*
                                                                                                                                                                                                                                                                                                                                                                                                            /db xret-"taxon:9606"
                                                                                                                                                                                                                                                                                       Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  186 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          west Local Similarity 95,18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  178 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                         1. .1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 833;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ouerty Mateh
                                                                                                                                                                                                                                                                                                                                       SOUTH C:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       جَ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>=</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \bar{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \frac{2}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
```

```
Arakwa, T., Shinaqawa, A., Shihata, K., Yoshino, M., Itoh, M., Ishii, Y.,
Arakwa, T., Hara, A., Fukunishi, Y., Konno, H., Adachi, J., Pukuda, S.,
Arakwa, T., Hara, A., Fukunishi, Y., Konno, H., Kondo, S., Yamahaka, I.,
Saito, T., Okazaki, Y., Golobori, T., Hono, H., Kasukawa, T., Saito, R.,
Kadota, K., Matsuda, H., Ashburner, M., Bataloy, S., Casavant, T.,
Fleischmann, W., Gasakerland, T., Gissi, C., King, B., Kochiwa, H.,
Kuchi, P., Lewis, S., Matsud, Y., Nikaido, I., Pesole, G.,
Ouackenbush, J., Schriml, L.M., Staubli, F., Suzuki, R., Fomita, M.,
Wagner, J., Washio, T., Sakai, K., Okido, T., Furuno, M., Aono, H.,
Haldarelli, R., Barsh, G., Hake, J., Hoffelli, D., Hojunda, N.,
Carninci, P., de Bonaldo, M. F., Brownstein, M.J., Bult, G.,
Fleicher, C., Fujita, M., Gariboldi, M., Gustincich, S., Hill, D.,
Holmann, M., Hume, D.A., Ramiya, M., Lee, N.H., Lyous, P.,
Marchionn, L., Mashima, J., Mazzarelli, J., Mombaerts, P., Nordone, P.,
Kingwald, M., Rodriquez, L., Sakamoto, N., Sasaki, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Carninei, E., Shibata, Y., Hayatsu, N., Suqahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new geness Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Shibata, K., Itoh, M., Aizawa, K., Nataoka, S., Sasaki, N., Carninci, P., Konno, H., Akyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sami, N., Ishi, Y., Nakamura, S., Hazama, M., Nishito, I., Harda, A., Yamamoto, R., Matsumoto, H., Sakaquchi, S., Ikeqami, I., Kashiwaqi, K., Puliwako, S., Inoack, K., Togawa, Y., Isawa, M., Ohdra, E., Wardhiki, M., Ohday, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A., and Hayashizaki, Y., Riken integrated equence analysis (RISA) system (44 format Sequencing pipeline with 384 multirapillary sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia, Eutheria, Rodentia, Sciuroquathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus 10 days embryo whole body cDNA, KIKEN tull length
enriched library, clone;2500917M22;refinoblastoma 1, tull insert
                                                                                                                                                                                                                 CCLATTITAACAACTGCACAGTGAALCCAAAAGAAAGTAT 1019
                                                                                                                                                                                                                                                                                   703 CACCACGAAAAAGTAACCTTGATGAAGAGGTGAATGTAATTGCTCTACACATTCCAGTTA 762
                                                                         902 GGACTGTTATGAACACTATCCAACAATTAATGATGATTTTAAATTCAGCAACHGATCAAC 961
                                                                                                                                    763 GGACTGTTATGAACACTATCCAACAATTAATGATTTTAAATTCAGTAAGTGATGAAC 822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus museulus (strain:0578L/63) To days embryo clow to mkwa,
clone_lib:RikEw full length enriched mouse clow library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              High-etticlency tull-length cDNA cloning Meth. Enzymol. 303, 19-44 (1999) 99279253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZYYE
                                                                                                                                                                                                                                                                                                                                                         1020 ACTGAAAAGAGTGAAGGATATAGGATACATCTTTAA 1055
                                                                                                                                                                                                                                                                                                                                                                                                                       883 TATACCCCAAAAGAACCIAAGCAAIAIAGGAAIAA 918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1364 lag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Carninci, P. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AK011246
AK011246.1 GI:12847243
HIG: CAP trapport
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clone:2600017M22.
                                                                                                                                                                                                         962 CITICAGAAAAICIGALII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AK011246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AK011246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SHOCK
                                                                                                                                                                                                                                                                           a
                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                         ò
```

```
Adachill, Alfawa, K. Akahira, S., Akimura, T., Aduo, H., Atai, A., Arakawa, T., Haldarolli, R., Homo, H., Brownstein, M., Hult, C., Carninci, P., Phunda, S., Fukunishi, Y., Furunci, M., Hanayaki, T., Hara, A., Hayatsu, N., Hill, D., Furunci, K., Hirando, K., Hirando, T., Horei, F., Hume, D., Imolani, K., Ishii, Y., Troh, M., Towa, M., Koya, S., Kato, H., Kawai, T., Kojima, Y., Kouno, B., Kouda, M., Koya, S., Kuribara, C., Matsuyama, T., Miyaraki, K., Numaraki, R., Ohno, M., Okaraki, Y., Sahai, K., Satuo, H., Sasaki, D., Salto, H., Salto, F., Sakai, K., Shinaqawa, A., Shiraki, T., Soqabe, Y., Suzuki, H., Tayami, M., Tagawa, A., Shiraki, T., Tanamaka, L., Tanami, M., Tagawa, A., Takaki, T., Yananaka, L., Yashida, K., Yoshida, K., Yashino, M., Mutamatsu, M., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Encyclopedia propared and sequenced in Mense Genemo.
Encyclopedia Project of Genemo Exploration Research Group in Riken Genemo Seiences Center and Genemo Exploration Research in FIREN Division of Experimental Animal Research in Miken contributed to prepare mouse Lissues. First strand count was primed with a primer 15 Georga Grand Genemo Contributed to prepare mouse Lissues. First trand count was primed with a primer 15 Georga Grand Genemo Contributed to prepared by using telesiose thermo-artivated research as sequence 15 strand count was prepared with the primer adapter of sequence 15 Grand Genemo Contributed for full-length by cap-trapper. Second strand count was prepared with the primer adapter of sequence 15 Grand Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Genemo Gen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BTEEPEFTALCGKLIKVPDHVMEKAMITIMEKVSSVD3TLEGYTQKKKFTWGTCTFTAAV
DLOEMPPTFTELQKSTFTSVVKFFPDTTKETFTSFKVJNAMSPLTKKYNVLGALYSKLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /translation-"MPPKAPFRAAAEPPPPPPPPPPPFEDDPAGDSGPEELPLAFURFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RTCELLIYLTQPSSALSTELNSMLVLKISWITTELLAKGEVLQMEDDLVISFQLMLCVVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YETKESPPALLBEPYKTAALPTNSSPFTPRRGONRSARTAKOLENUTRITBVL/KEHE
CNIDEVKNVYFKNFTPFTNSLGIVSSNGLPEVESLSKRYEEVYLKNKDLDARLFLDHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Physical and Chemical Fessarch (PIKEN), Laboratory for Genome
Exploration Research Group, RIKEN Genomic Sciences Center (GSC),
RIKEN Yokohama Institute; 1-7-22 Suchito-cho, Isbrumi-ku, Yokohama,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             //oione_lib="FIKEN full-length enriched mouse oFNA library"
Sato F. Schonbach, C. Saya, T., Shibata, Y., Storch, K. F., Suzuki, H. Toyo-oka, K., Wang, K. H., Weltz, C., Whittaker, C., Wilming, L., Wynshaw-Boris, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Flease visit our web site (bitp://genome.gsc.riken.go/jp/) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RINEN vokohama Instituter; 1-7-22 Suchimo-cho, Tsurumi-ku, Yok
Kanagawa 230-0045, Japan (E-mail-genome-ces@gsc.liken.go.jp.
URL http://qoneme.gsc.liken.go.jp/, Tel.81 45-503 9222,
Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                     Functional annotation of a full-length mouse cDNA collection Nature 439 (6821), 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zind +-"data sturot-Milly, sturot key-Mill 97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Mus_musculus"
/strain="CS7BL/60"
/3E_ALET "IAND:M_BELEFORSTAGE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /dev_stage="10 days embryo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref-"mGD:MGI:1905260"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref~"MGD:MGI:97874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_vrof="taxon-10040"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /cione-"2600017M22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /codon_start-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       evidence: ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="Rb1"
151. .>1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 (bases 1 to 1364)
Adachiji, Airama W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /gene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1, .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOLR.
                                                                                                                                                                                                                                                                                                                                                                                                                 11217851
                                                                                                                                                                                                                                                                                                                                                                               21085660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                            PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4500
                                                                                                                                                                                                                                                                                                                             JOHENAL
```

COMMENT

FEATURES

SCO

```
KTLQTDPIDSFETEPTPFKNNPDFEFANVVTFHTPVFTVMHTTGGTMVTLNSASDQPSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                989 ATGAGGGAAAAATGTTTATTTAAAAATTIFIAIGGGTGAAATTGAAATGG 1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u> 1229 izabandingirilaringinanananangittangkantintangkantantangkanantaa 1288</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      932 TOATOATTTTAAAATTOASSAAGTGATOAASSASSASSAAAADOTGATTTOOTATTTAAOA 991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F92 TAACATCTAATGGACTTOO AGAGGTGGAAAATOTTTOTAAAGGAATAGGAAGAAATTTATO 751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         752 TERAKAAAFAAAGATOTAGAFIRAGATAATTITEGGATOAFGATAAAAAOTOFFOGGAGTIG 811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            872 TGAATGTAATTGGTGCAGAGAGTGGAGTTAGGAGTGTTATGAACACTATGCAACAATTAA 931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               392 TACAAATGAAAGAAGATCTGATCTCATTTCAGTTAATGCTATGTGTCCTTGACTATT 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                572 AACTAGAAAATGATACAAGAATTATTGAAGTTCTCTAAAGAACATGAATGTAATATAG 631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              929 AACTAGAAAATGATACGAGGATTAFCGAGGTTCTTCTCTAAAGAACAACGAGTGTAAATATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 449 PASCASTESATCTAGATCAGATONIATICACTITIACTGACTACAGAAAAAAAAAAAAAA 508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       212 AT STREET AND TOTAL SAN TATE IN A TREET STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               569 ATGCTATGTCAMGACTATTGAAGAAGTATAATGTGTTATGCACCTATAATTAG 628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      272 AAAGGACARGRGAACTTATATATTTGACACAGCGGGCAGTTCGATATCTACTGAAATAA 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           332 ATIVTGATIANTANTAAAANTIVITAAATOAAAIITITATAATAATAAAIITATAAATAAAGGAAGTAI 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                809 TIATTANAT FOR SOFFED FEDALT ALTERIAGEN NATALAAAAN AET GEALLE FEDALT OF EER
                                                                                                                                                                                                                                                                                                                                                                  0; c.ps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              152 THASTSTANDANATOPPTANAMENANANANAMATTANTAGONGTACHANAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   452 ITATTAAAGTGTGGGATGTTGGTGAAAGAAGAGATALAAAAGAGGTGTTATAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 11, Length 1364;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                 Pred. No. 2.6e-137;
0; Mismatches 102;
                                                                                                  346 t
                                                                                                                                                                                                                                                                Scare 752.8,
                                                                                            307 g
                                                      NLISYFNNCTVNP"
                                                                                                                                                                                                                                                          22.7%,
88.3%,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          992 ACHDACACHCAAHOA 9007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1349 ATTGCACAGTGAATCC 1364
                                                                                                       306 0
                                                                                                                                                                                                                                                                                                                                                            Matches 814; Conservative
                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                  404 3
                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                      Best Local
                                                                                                       HASE COUNT
                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <del>ي</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ē
```

```
Site, 1: Ecoky (destroyed); Site 2: Not1; kNA source pool of three ovaries, from remales ranging in age from 38 to 49 yo. Library is oliqor primed and directionally cloned (EcoRV Site is destroyed upon cloning). Average insert
                                                                        AGENYOURT 5505184 NIH_MGC_125 Homo sapiens conn clone IMAGE:5588245
                                              EST 10 PEB-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              constructed by C. Gruber (Invitrogen). Research Genetics
tracking code 036."
                                                                                                                                                                                                                                             Enkaryota: Metazea: Cherdata: Craniata: Vertebrata: Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     size 2.1 kb, insert size range 1-3.5 kb. Library is normalized and enriched for full length clones and was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2290 TTGGBBACTTCTGAGAAGTTCTCAGAAATAAATGAGTGGTATGTAACGACGGGGTGTG 2349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25.00 ADTATODATACCICAAACAAGAAGAAATGAAGAATCTCAGGACCITGGTGGACAACTGT 2589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2410 AFFGAAGGAFCAGATGAAGGAGATGGAAGFAAAGATGCGGAGGAGGAFCFCGAAAFFFGAG 2469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2590 GTACACH FIGGAL FCALLG FCTC LCACAGA FCTCACH GTATAAC TTFCCAGG FFCTGT - 2649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDNA Library Arrayel by: The L.M.A.G.E. Consortium (LLNL) INA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                National Institutes of Health, Mammallan Gene Collection (MGC) Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360 ATTGAAGGATCAGAAGGAAGTGGAAGTAAACATCTCCCAGGAGGCCCAAATTTCAG 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480 AGCATGGATACCTCAAACAAGAAAGAAATGAGAGATCTCAGGACCTTGGTGGACTGTT 539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /hote "ordan: ovary (pool of 3); Vector: pCMV-SPOR16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240 TPHAGACLETGAGANHEGAGAAALAAALGAGALGHATGHAAGGAAGGHATGHAGAAGGAAGGHGHG 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6; Gaps
                                                                                                                                                                                                                                                                  Mammalia: Eutheria: Frimates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 135 Genetth 1122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CONA Library Preparation: Lite Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 752.4; DB 13
Prod. No. 3.1e-137;
                                           mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          359 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   o, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           http://image.llnl.gov
Plate: LLAM12459 row: a column: 14
                                                                                                                                                                                                                                                                                                                                                                                            Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo-sapions"
/db_xrel="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zelone_lib-"NIH_MGC_125"
Zlab_host-"DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            High quality sequence start: 48
High quality sequence stop: 773.
                                                                                                                                                                                                                                                                                                                   NIH MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone-"IMAGE:5588245"
                                                 1122 hr
                                                                                                                                                                                                                                                                                                                                                                                                                   Email: cgapbs:r@mail.nih.gov
Tissue Proenrement: Invitrogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          216 9
                                                                                                                                           BM545881,1 G1:18778465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                enery Match
Best Local Similarity 95.68;
                                                                                                                                                                                                                                                                                         (bases 1 to 1122)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          185
                                                                                             mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .1122
                                                                                                                                                                                                                         Home sapieus
                                                                                                                    HM545881
                                           RM545881
                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Source
                                                                     DEFINITION
                                                                                                                                                                                                                      PROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                    A TORSKIELN
                                                                                                                                                                  KEYWORDS
SoftRCE
                                                                                                                                                                                                                                                                                            KEFFERENCE.
                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                    JUSTINAL.
                  BM%4%81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
MESSIEL 7
                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                              CAMMEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NI E
                                              SHUEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>-</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
```

```
ALS97811 727 bp mRNA linear ESG 14 Aud 2001
DKEZp31300816_rl 313 (synonym: hleez) Homo sapiens cDNA clone
DKEZp31300816-5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Poustka.A., Wellenfeuther,R., Mewes,H.W., Weil,H. and Wiemann,S.).
EST (Poustka,A., Wellenfeuther,R., Mewes,H.W., Weil,H. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Heidelberg/Germany) within the JNA sequencing consortium of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Please contact the RZFD: Ressourcenzentium, Heubherweg 6, 14059
                                                                    2650 TIATGASCACATITAATATCTICAASTCTTTIGIGGATATAAAAAGGG AGATGYAATT 2709
                                                                                                                                                                                                                                                        2830 AATTGCTGTGTTTTATGGATAGTAAGAAGGCCCTAGAGGGGGAGGCTGATAACCAGG 2889
                                                                                                                                                                                                                                                                                                                                                                                                                                          2890 CCTGTCTGACTTCCTTTCTTTGTACCATATAGGTGATGTTTGCTTTGTTTTAT 2949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2950 TAATTTATA - "IGTATATTTTTAATTTAACAIGAA - CACCCTTAGAAAAIGIGIGCTA 3006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3067 PCCAAAAAT-CCAFATTATTACAAAATTACAAAAATTACTAATTTATATATTAGATTT 3125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This is the 5' sequence of the clone insert
Clone from S. Wiemann, Molecular Genome Analysis, Serman Cancer
Research Center (DKFZ); Email s.Wiemann-dKtz heidelberg.de;
                                                                                                                                                              3007 TCTATCTTCCAAATGCAATTTGATTGACTGCCCAATTCAACAAATTATCCTGAACTCTTC 3066
                                                                                                                                                                                                                                                                                                                                                                          600 ITATGGCCACATITAATATGTTCAGCTCTTTTGTGGATATAAAATGTGCAGATGAAATT 659
                                                                                                                                                                                                            660 GITTG8GIGALICCIAAGCACIIGAAAIGTIAGICAIIGIIAIIAIAAAAAAIG19
                                                                                                                                                                                                                                                                                   This clone (DKFZp31300816) is available at the RZPD in Berlin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        840 CCTGTCTGACIACITIGCCTTC-TTTGTAGCATITAGGNGALGTTTGCTCTTGGTTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                         sequenced by DKFZ (German Cancer Research Center,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Max-Planck Institute for Molecular Semetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: poustka@mpimq-berlin dahlem.mpq.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Threstrasse 73, 14195 Herlin, Germany Tel: +49-30-84131623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3126 TATTITACTATTGGAATCTGATATA 3150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1078 TATTTACTATTGAAAAAGGGAATA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No sl sequence available.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AL597811.1 GI:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Poustka A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    German Genome Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eax: +49-30-84141128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Department Lehrach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A1,597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò.
                                                                                                                  2
                                                                                                                                                                                                                                                                                                                                                     ó
                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                               ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ô
                                                                                                                                                                                                          ã
                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                      <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
```

```
.
O
                                                                                                                                                              /hote="Vactor, pTrip(EX2, Site_), SfilA, Site_2; SfilB, cDNA-collection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1201 GAAATCTAGGTGTGTGTTTGAGGTGTTTATAAAAAAGGGGTAGGGGTAGGGTATGTGGGGT 1760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1881 AATTATGAIGTGTGCAFGTATGGCATATGCAAAGTGAAAAAATATAGACTTAAATFCAA 1940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2181 GAACATCIATATTTCACCCTGAAGAGTCCATATAAAATTTCAGAAGGTCTGCGAACACCC 2240
                                                                                                                                                                                                                                                                                                                                                                                                 176. JAAATACACTITGIGAACGCCTITCTGTCTGAGGGGGGAGAATTAGAACATATGTTGGAG 1820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1941 AATPAT BITAAPAGGATAPAAGGATPTFPPPTPAFGPFPPPTPAGGAGAGAGAGGGTGT 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2121 ACCITACATTCCTCGAAAGCCCTTACAAGTTTTCTTAGTTCACCCTTAAGGATTCTTGGAAG 2180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2241 AACAAAATGACTGGAAGATGAAGAATCTTAGTATGAATGGGGGAATGATGGGGGAACTTC 2300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2361 IGCTGAAGGAAGCAACCTTGTAAAGCACTGAAAAACTAGGTTTTGATATTGAAGGATG 2420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 CCITITICCAGGACACACTICCAGAATGAGTATGAGAGAGAGAGAGAGATTTGGAGCA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 AATCATTGTAACAGCATACAA3ATCTTCTCATGCTGTTGAGGA3ACATTCAAACGTGF 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ++1 IGCIGAAGGAAGCAACCTFGTAAACCAGGAAAAACTFAGGCTTTGATTGAAGGATC 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541 AACAAAAJGACTICAAGATCAAGAATCETAACTATGAATTGGTGAATTGTGGGACTTC 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601 ISAGAAGITICCAGAAAATAAATCAGATGAGATGTAAAGAGGGTGTGTGAAAAGAAG 660
                                                                                                                                                                                                                                                                                          0; Caps
                                                                                                                                                                                                                                                                                                                                                21,8%; Score 725.4; DB 9; Length 727; 99 99; Pred No. 6,2e-132;
Berlin-Charlottenburg - GFPMANY- Email- - clonesraph do Location-Caulifiets
                                                                                                                                                                                                                                                                                          Indels
                                                                                     /clone-"DKF2p3130816"
//clone_lib="314 (synonym: hlcc2)"
//dev_statae="adult"
/!ab_host-"DH108"
                                                                                                                                                                                                                                                                         Prod No. 6,26-132;
                                                                                                                                                                                                198 t.
                                                                                                                                                                                                                                                                                        0; Mismatches
                                                 /organism-"Homo sapions"
/db_vrot-"tavon.G606"
                                                                                                                                                                                                130 q
                                                                                                                                                                                                                                                                                        Conservative
                                    .727
                                                                                                                                                                                                                                                                     ونسايا عديدي
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2421 AGATGAA 2427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7.21 AGALGAA 7.27
                                                                                                                                                                                                                                                                                        726;
                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                         F.,()
                                      SOULCE
                                                                                                                                                                                               BASE YOUNT
                                                                                                                                                                                                                                                                                        Matellos
               FEATURES
                                                                                                                                                                                                                    NISTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>...</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>::</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     يَ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>}</u>:
```

RESULT 9 BQ222247

```
/note="Organ: testis: Vector: pCMV-SPORM6: Site_1: Not1: Site_2: Sall, Cloned uniditectionally, oligo-dr primed. Average insert. Size 2.5 kt. Library enriched for full-length clones and constructed by Lite Technologies. Note: this is a NHHMGC Library."
                                                                                                                                                                 Eukaryota, Metazda, Chordata, Craniata, Vertrebrata; Eutelecstomi; Mammalia, Eutheria, Primates, Catarrhini; Hominidae; Homo. (bases 1 to 880)
NIE MSP Entry/Ampr nei mih 900/2.
                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          244 GTATTGTTTGCACTCTTCACCAAATTGCAAGGACATGTGAAACTTGTGAAGTTTTTGACACAA 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   424 CAGTTAATGCTATGTCTTGACTATTTTAAACTCTCACCTCCCATGT1GCTCAAA 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             544 PAGAAPAGGAGTGPAFGGATAGCAAAACAAFTAGAAAATGATAFAAATTATTGAAGTT 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             604 CTCTGTAAAGAACATGAATGTAATATAGATGAGAGAAAAAAGTTTGAAAAATGTTTGAAAAATTTT 663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                364 ACAITITIATTAGCIAAAGGGGAAAGTATIAMAATGGAAGATGATGATGTGGTGATTTCATTT 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           484 GAACCATATAAAACAGCIGTIAIACCCAITAATGGITCACCICGAACACCCCAGGCGAGGT 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GTATTGTTTGCACTCTTCAGCAAATTGGAAAGGACATGTGAACTTATATATTTGACACAA 60
                                                                                                                                                                                                                                                                                                                                                  cDNA Library Preparation: Lile Technologies, Inc. CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by. Agencourt Bloss induce Corporation Clone distribution. Margin clone distribution in through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21.7%; Score /20.6; DB 14; Length 880; 98.7%; Fred. No. 5.4e-131; Live 0; Mismatches 9; Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue_type="embryonal carcinoma, cell line"
//ab_host="94198 (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   http://imagc.llnl.gov
Plate: LLAM13279 row: i column: 20
                                                                                                                                                                                                                                                                                        Contact, Robert Strausberg, Ph.D.
Email, egaphs remail.min.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone_lib="NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone-"IMAGE:6041563"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence stop: 606.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                         Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 737; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .880
                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      321 a
                                                                                                                               numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                       NETINITE
                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HASE COUNT
                                                                ACCESS:ON
                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>1</u>2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             · . Oy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d
```

δ

ORIGIN

```
/hote="Ordan: prostate; Vector: pDNR-LIB (Clontech);
Site_1: Sfil (ggeogectegges): Site_2: Sfil (ggeoattatggee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Enkaryold, Motazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo, I thases, 1 to 823, National Mark http://mer eci mih eov/ National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              uence: 5'-CACGGCCATTATGGC-3' and 3' adaptor
5'-AITCLAGAGGCGGAGGGGGGGAGATG-dT(30)HN-3'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (where B - A, C, or G and N - A, C, G, or T). Average insert size 1.5 kb (range 0.9-4.0 kb). In 4/15 colonies contained inserts - By PCR, This library was enriched for full length clones and was constructed by clontech
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ); Double-stranded CDNA was prepared from cell line RNA. 5' and 3' adaptors were used in cloning as follows: 5' adaptor sequence: 5'-CACGGCATTATGGGC-3' and 3' adaptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MCS clone distribution: MCS clone distribution information can be tound through the 1.M.A.G.E. Consortium/ilML at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Laboratories (Palo Alto, CA). Note: this is a NIH_MGC
664 ALAYYITITAFGAALFYICTESIAACALGTAATGGAAGFFGGAGGTIGAAAAT 723
                            284 TEGGATCATGATAAAACTCTTCAGACTGATTCTATAGACAGTTTTGAAACACAGAACA 843
                                                                                                                                                                                                                                           691 (CA) GAAAAASTAACTTGATGAAGATGAATGTAATTCCTCCAGAGACTCCAGTTAGG 660
                                                                                                                                                                                                                                                                                                                                                                                                                                 304 N'TGTTAFGAAGACTAFGGAACAATTAATGAIGAITITAAATTGAGGAAGTGAFGAA-GC 962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                224 CITTCIAAANSAIACGAAGAAAITTAFCITAAAAAIAAAAGATCIAGAIGGAAGAITAIT 783
                                                                                                                                                                                                                                                                                                                                                          cONA Library Preparation: CLONEIECH Laboratories, Inc. cONA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /cloue "IMAGE.47.97634"
/cloue_lib "NHL MGC_60"
/lissue_lspe="ademocarcicoma"
/lab_host "DH10B (II phage resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence: 5'-ALICIAGAGGCGAGGGGCGG (where B=A, C, or G and N=A, C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plate: LLCM1605 row: o column: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /ordanism "Homo sapiens"
/db xret="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Robert Stransberg, Ph.D.
Email: eqapbs r*mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         High quality sequence stop: 709.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      963 TTCAGAAAATCTGATTTCCTATTTAA 989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fissue Procurement: DAID/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              adaptor sequence;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mKNA sequence.
BG610651
BG610661.1 G1:13662032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Library."
148 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               H 2 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No LILINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              - ROVING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEEEEKEN.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B Fe 106.6.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYW-REE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NW
                                                                                                                                                                                                                                                                                                                                                                        ã
                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                     ÷
```

142 q

HASE CHUNT

```
AL563757 ITT_NFL001_NRC4 Homo sapiens chwa clone r80hho07YA05 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2631 TAACTITICCCAGGITCLGTITALGGCCACATITAATATCTLCAGCTTTTTTTT 2690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2991 TAGAAAATGTGTCCTATCTFTCTAAFTTCAATTTGATTGACTGCCCAFTCACAAAA 3050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2451 AGGAGAGTCGAATITTCAGGAGAAACTGGGAGAATGATTTCTATTCGAACACGAATGCA 2510
                                                                                                                                                                                                                                                                                                                                      2511 AAAGCAGAAAATGAATGATAGCATGGATACCTCAAAGAAGAAGAAGAAATGAGGATCTCA 2570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2811 GETICCICTICCAAAGIAAAAIIGCIGCIIIAIGGAFAGIAAGAALGGACTAGAGIG 2870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0931 BESTTTANTATTTATTATTATTATATATATTATTTTTTTAATTTAANATTAANANANEEL 2990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3108 ATTITAGACATIAGATITIATITIACIATIGGAATCIGAIACIGIGGGGTTGTTIAL 3167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2751 TATITATACAAGAITGAAAAICTIGIGIAAA1CCIGC AIIIAAAAAGIIGIAGAAAIT 2816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1051 TTATCCIGAACTCTTCTGCAAAAAIGGATATTATTAGAAAATT --- AGAAAAAAATTACTA 3107
                                                                                                                                                                                                                                                                                                                                                                                      481 TGTTTGGTGTTGTATTATTAATTTA1ATGTA1ATGTTTTAATTTAAGALGAACACT 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              718 IAAAA111GCTIIAACIAAGAIACAAGCIGGAAGCAAAGIAI ACATATGATATAA 776
                                                                                                                                                                                                                                                  1 AGGAGAGTCCAAAATTTCAGCAGAAACTGGCAGAAATGACTICIACTGGAACACGAAATGCA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181 TAACTTTGCCAGGTTCTGTTTATGGCCACATTTAAIATCTTCAGCTCTTTTGTGGAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2691 AAAATGTGCAGALGCAALGILIGGGLGALICTIAAGCCAGILGAAALGILAGTGATGT
                                                                                                                                                                                                               21.1%; Score 699.5; DB 12; Lyngth B24; 94.8%; Pred. No. 7e 127;
                                                                                        34; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3228 INCINCTOANAGACITICATACCICAGAATGIAAAAGAAGI 3269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              777 TACTATTIGAA--CAGATTCATACCTCAGAAIGIAAAGAACT B16.
                                                                                        0: Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AL563757.1 GI:12913464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            prime, mRNA sequence.
Query Match
Best Local Similarity 94.89
Matches 779; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hollic sapietis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AL563757/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \Gamma_{\Gamma}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   οy
```

```
Matches 747;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                      No.1.1.1.1.1.1.3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                         RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RPFPRENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHOPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                           BG570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NOISCHA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ζ
                                                                    ΟŅ
                                                                                                               Ē
                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                    ź.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vector. Library was normalized. Library was constructed by Lile Technologies. Contact: Feng Library was constructed by Lile Technologies, a division of Invitrogen 9800 Medical Center Drive Pecebilla Maryland 2086 max (1) 301 610 8371 Email: fliangelifetech.com URL.
                                                                                                                                                                                                                                                                                                                                                                                                                                   was primed with a Not1-oligo(dT) primer. Five prime end enriched, double stranded CDNA was digested with Not I and cloned into the Not I and Eco RV sites of the penvsport 6.
                                                                                                                                                                                                                                                                                                                                                                                                                    /note-"digain brain; Vector: poMVSPoRt &: 1st strand chWA
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammelia, Fulberia, Primates, Catarrhini, Beminidae, Heme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   972 (CLOA) LICCTATIFFAACAACTICCACAGIGAATCCAAAAGAAGTATACTIGAAAAGAGT 1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                312 IYTGTTTPYTWTTPTTGGACTGCACAGAGAAAGAAAGAAGTATACTGAAAAGAGT 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      552 (JAGTGCACGCAAAACAACTAGAAATGATACAAGAATTATTGAAGTTTCTGTGTAA 611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5.1.2. ASAACALGAATGIAAFATAGATGAGGTGAAAAATGTTTGTTTCAAAAATTTTTATACCTTT" 671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8/2 IAIGAAIICICIIGGACIIGIAACAICIAAIGGACIICCAGAGGIIGAAAAICIIICIAA 731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7.12. ACCALACCAASAAATETALICTTAAAAATAAAGATGTAQAAGATTATTTTTTTTTTGATGA 79.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            552 ACGATACGAAGAAATTTTTCTTAAAAATAAAGATCTAGATGCAAGATATTTTTGGWTCA 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3] 2 GAACACIALGMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       742 IGATAAAACTOTTOAGACTGATTOTATAGACAGTTTFTGAAACACAGAAGACACGAAA BST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           852 AAGIAACCTIGAIGAAGAGGIGAATGIAGAGIGCIGCACACIGCAGIIAGGACIGITAI 911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indets 3, Caps
                                                                                                                                                                                              Email: seqref@genoscope.ens.fr, Web . www.genoscope.ens.fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . Match 21.0%; Score 698.2; DH 9; Length 792, Local Similarity 93.6%; Prod No 1 %e-126; es 722; Conservative 23, Mismatches 23, Indels 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26 others
                                      1 (bases 1 to 792)
Liver, Gruber, C., Jessee, J. and Polayes, D.
Pyil length chwa libraries and normalization
(mpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="neuroblastoma_cells"
/iab_host="phi0B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              http://fulllongth.invitrogon.com*
148 c | 117 q | 255 t
                                                                                                                                                   Genoscope Centie National de Sequencage
BP 191 91006 EVRY codox - Franco
                                                                                                                                                                                                                                                                                                                                /clone_lib="LT1_NFL001_NBC4"
                                                                                                                                                                                                                                                                /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                  /db xret="taxen:9656"
/clone="CS000007YA05"
                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    117 q
                                                                                                                                                                                                                                                                                                                                                  /sex-"male"
                                                                                                                                   Contact: Genoscope
                                                                                                                                                                                                                                         792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ouery Match
                                                                                                                                                                                                                                              Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE C MINT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                            J-MIKNAL
                                               Y NIN I I
                                                                    AULESKS
                                                                                                                                                                                                                     FEATURES
                                                                                                                                 MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RI:IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ė
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
```

```
/clone_lib="NiH_MGC_77"
/lab_bost="DH10B (Tl_phage=resistant)"
/note="Corgan: lung: Vector: pDNF-i.H (Cloutech); Site_l:
Sfil (ggregoctggc); Site_2: Sfil (ggrecattatagc); 5; and
3' adaptors were used in cloning as follows: 5' adaptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence: 5'-CACGGCGATATGGCC-3' and 3' adaptor sequence: 5'-CACGGCGAGGGCGCAAG-dI(30)BN-3' (where B - A. C, c, or G and N - A, C, G, c, r). Average insert size 1.9 to (range 0 5-4 9 tb). "2/15 colonies contained inserts by PCR. This library was enriched for full-length clones and was constructed by Clontech Laboratories (Palo Alto, CA). Note: this is a 125 c 130 g 279 L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BG570456 767 bp mRNA linear EST 10-APR-2001 h02591312P1 NHLMGC_77 Home sapiens cDNA clone IMAGE:4712874 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fukaryota, Metarea, Cherdata, Cramiata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2591 IACACCTCTGGATTCATTGTCTCTCACAGATGTGACTGTAIAACITTCCCAGGTTCTGTT 2650
                                                                                                 1092 CGAAATTGGATCACACGATACAAACTTGG--AGTTGGCTTGTATTACCGAGTAATGGAA 1145
                                                                                                                                                                                                                                 1150 TOCATGOTTAAAATGAGAAGAAGAATTATGGATTGAAAATTTTAGGAAACTTGTGAAT 1209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2531 GCATGGATACCTCAAACAAGGAAGAAAIGAGGATCTCAGGACCFIGGIGGACACTGIG 2590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: cgapbs:randlinhigov
Tissue Flocurement. CLONTECH Laboratories, Inc.
cDNA Library Preparation CLONTECH Laboratories, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MCC clone distribution information can be
found through the I.M.A.G.E. Consortium/illn. at:
                                                                                                                                                                   192 CGAAATTGGATCACAGGGATACAAACTTGGTTTTGGCTTGTATTACGGAGTAATGGAA 134
National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
                                                                                                                                                                                                                                                                                                132 TCCATGCTTTATLCAGAAGAAGGACGATTATCCATTCAAAATTTTTBCCACACTTCTCAAL 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20.8%; Score 692.2; DB 12; Length 767; 97.1%; Pred. No. 2e-125;
                                                                                                                                                                                                                                                                                                                                                                  1210 GACAA-CATTTTTCATATGTCTTTATTGGGGTGGGCTCTTGAGGTTGTAAT 1259
                                                                                                                                                                                                                                                                                                                                                                                                 18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Plate: LLCM1568 row: h column: 03
High quality sequence stop: 726.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact, Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref-"taxon:9606"
/clone-"IMAGE:4717874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NIB-MGC Ritp.//mar act.alb.apv/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HG570456.1 GI:13578109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 767)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ouery Match
Hest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human
```

```
HM466194 BST 05-FEB-2002
COMMONIAL 6456973 NIH, MGC_92 Homo sapiens cond clone IMAGE:5576939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                               2651 TATEMPRAPELLIAATATOTOPORTGITTELBIRGAAAAHGROPAGATGCAATTG 2710
                                                                                                                                                                                                                                                                                                                                                                                                                                             2771 FOLD GLAAA FOOTGOVALTIAAAAAGTTOLAGAAGATGTTTVVVTGTAAAGTAAA 2830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2831 ATECHGIGHTIALGGALAWAAATGGGGGTAGAGGGGAGTCOTGATAAOOGAGGG 2890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2891 CTGTCTGACTAGCTTTGCCTTCTTTGTAGCATATAGGGTGATGTTTGCTCTTGTTTATT 2950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   295] AALITAJAIGFATATITITITAATIJAACATGACGTTAGAAAALGTGTCTTATGTA 3010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1190 AAAAGCTGGAAGGAAAGTATAACCATATGATACATACTACTACTGAAACAGATTTCATA 3249
                                                                                                                                                                                                                                                                2711 TITGGGTGALTCGTAAGCCACTTGAAATGTTAGTCATTGTTATTATACAAGATTGAAAA 2770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3011 ICT PONAA IGGAATEIGAFIGACI - GOGGA FIGACGAAANTRAFIG IGAACHCTFGFIGG 3069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8070 AAAAAFGGATATTATTAGAAATTABAAAAAAATTACTAATTTTACATTTAGATTTATT 3129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3130 TIACTAGGAAFCLGAFAIACTGIGTGCTTGTFTTATAAAATTFTGCTTTTAATTAAAT 3189
61 TACACCTCTGGATTCATTGTCTCTCAGAGATGTATAACTTTCCGAGGTTCTGTT 120
                                                                                                                             TITELLE FELTELLE FELT
                                                                                                                                                                                                                                                                                                                                                         181 TELGGSTGATTCCLAAGCSASTIGAAATGTTAGTGGTTGTTATTGTAGAGGTTGAAAA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cona Library Preparation: Lite Technologies, Inc.
clnA Library Arrayed by: The L.A.A.G.E. Consortium (LLNL)
lonA Sequencing Astendorum Hioscience Corporation
clone distribution: MGC clone distribution incommation can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481 ICLESCAALIGGALIGGALIGGCCCALICACGAAAATTATGCIGAACTTCTGC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         660 AAAARTIGGAAGC-AAGIAIAACCAFATGAFATATATATGAFAACAGATTTCATA 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     National Institutes of Health, Mammallan Gene Collection (MGC) Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia; Entheria: Primates: Catarrhini; Hominidae; Homo.
1 (bases 1 to 972)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4250 CCTCAGAATGT-AAAAGATTAGTGATTATTTTTTTGATGGAAGTTAT 3297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plate: LLAM12329 row: ] column: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausborg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NIH MGC http://mgc.nci.nlh.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: egapbs ramail.mih.gov
Lissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BM466194.1 GI:18515236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HM466194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PESULT 14
BM466194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIVANTSM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOHNAI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           I.N.HWWI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             L. CHS
                                                                                                                                                                                                                                                                                                                                                    Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>-</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              :~
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>...</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 · _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ē
```

```
/note="Organ: testis: Vector: pWMV-Spckt6; Site 1; Not1; Site_2: Sall; Cloned unidirectionally; olido dr primed. Average insert size 2.5 kb. Library enriched for full-length clones and constructed by Life Technologies. Note: this is a NHL-MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8007 TCTATCTTCCAAATGCAATTTCATTGACTGCCALLCACCAAAALAACTTCTTC 3066
                                                                                                                                                                                                                                                                                                                                                                                                                           2587 TGTGTACACCTCTGGATTCATTGTCTCTCACAGATGTGACTGTATAACTTTC+CAGGTTC-2646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2647 TOTITATOGOCACATITAALATOTICAGOLOTITITOTOGATALAAAALGIGAAALIGAA 2706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2707 ATTGITTGGGTGATTCCTAAGCCACTTGAAATGITAGTCATTGTTATTATACAATG 2766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2767 AAAAICITGIGIAAAICCIGCCAITIAAAAAGIIGIAGCAGIITGIITGCICICICCICAAAG 2826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2827 TAAAATTGCTGTGCTTTATGGATAGTAAGAATGGGGCTTAGAGTGGGAATTGCTGATAAACC 2886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8067 IGCAAAAATGGATATTATTAGAAATTAGAAAAATTACTAATTTACTAATTTACAATTTT 3126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              127 ATTITACTATIGGAATCIGATATACTGIG · · · · TGCTTGITTTATAAAATTTTGCTTTT - 3181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2527 GATAGCATGGATACCTCAAACAAGGAAGAAAATGAGGATCTCAGGACTTGGTGGACAC 2586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2947 TAFTAAFTTATATGTATATTTTTTAATTTAACATGAACACCTTAGAAAATGTGTGCTA 3006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 TGTGTACACCTCTGGATTCATTGTCTCACACAGATGTGACTGTATAACHTTeeCAGGTTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 TGTTTATGGCCACATTTAATATCTTCAGCTCTTTTTGTGGATATAAAATGTGCAGATGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24] ATTGTTTGGGTGATTCCTAAGCCACTTGAATGTTAGTCATTGTTATAACACATTG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361 TAAAATTGCTGTGTTTATGGATAGTAAGAATGGCCCTAGAGTCCTGATAACC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661 ATTITACTATIGGAAICIGAIATACIGIGGGCITGGITIIIATAAAAIITTGCTITTA 720
                                                                                                                                                                                                                                                                                                                                                                                       et Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 691.8; DB 14; Length 972;
Pred. No. 2.3e 125;
                                                                                                                 /clone_lib-"NIH_MRC_92"
/tissue_type-"embryonal carcinoma, cell line"
/lab_host-"DHlQH (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches 19; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3182 AATTAAATAAAGCT - GCAACGAAAGTATAACG 3213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       721 ATTAAGATAAAAGCTGGGAAGCAAAGTATAACC 753
                                                         /ordanism-"Homo sapiens"
High quality sequence stop: 621.
                                                                                                /clone-"IMAGE:5576939"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "tavon:9606"
                   Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                              20.8%;
96.7%;
                                                                                                                                                                                                                                                                                                                                                                                     Matches 728; Conservative
                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                 Query Match
                                          SOURCE
                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                          OKICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \ddot{z}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Çx
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ó
```

```
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOUTH
                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ALLHUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                            B1868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                      :...
                 ó
                                                Ë,
                                                                                   ò
                                                                                                                  QD
                                                                                                                                                    Ś
                                                                                                                                                                                      Ë
                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
()
                                EST 05-FEB-2002
                              BM4%4724 AGEN2 GRI_6402743 NII_MGC_72 Hene sapiens cPNA clone IMAGE 5528614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /Lissue_type="melanolic melanoma"
/Lissue_type="melanolic melanoma"
/Lab_host "DH10B (phage-resistant)"
/Act: "Stan skin Vector poWV SmokT6, Site 1: Next:
Site_2: Sali; Cloned unidirectionally, Primer: Oligo dT.
Average insert size 2 kb. Library constructed by Lite
Technologies."

210 c 137 q 233 t. 1 others
                                                                                                                                                  Homo sapiens
Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1488 TOTTATTAAACAATCAAAGGACCGAGAAGGACCAACTGATCACCTTGATCTGCTTGTCC 1547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1548 ICTIAATCIICCICCCAGAATAATCACAGAGAGAGATAIGTTTGTTCGTGTAAG 1607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1668 AGGAACTCAGGCIIGCAGAGGAAGAAAAAATGAAAAIGIAGGIGIGIIICAGIGIIIIAA 1727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1728 JAAAAAGIGTATCGGCTAGCCTATCTCCGGCTAAATAGAGTTTGTGAAGGCTTFTGTGT 1787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1788 IGAGGACICOAGAATTAGAACATATCATCTGGACCTTTTCCAGCACACCTGCAGAATGA 1847
                                                                                                                                                                                                                                                                                   253 AGGAAGGLGAGGGTLGCAGAGGCAATTGAAATGTACCTGTTTCACTGTTTTA 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 835)
MIH MIT LIP CAP WING WHA A MARMMALIAN Gene Collection (MGC)
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria; Primates: Catarrhini; Homor Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20 4%: Score 678; DB 13, Tength 835;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Prod. No. 1.2e 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Fimilarity 100.0%; Fred. No. 1.2
Matches 678: Jonservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .835
/organism-"Homo sapiens"
                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone-"IMAGE:5528814"
/clone_lib-"NIH_MGC_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                          High quality sequence stop: 647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xret="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                              HM453724.1 GI:18502764
                                                                5', mkNA sequence.
BM453724
                                                                                                                                                                                                                                                      Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ر
ال
                                                                                                                                     human.
                                                                                                                    EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Outery Match
                                              LEFINITION
                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COME
                                                                                                                                                                                                      KUPERPNJE
AUTHOPA
                                                                                ACCESS:ON
                                                                                                                                                                                                                                                    JOHENAL
#1 - I I I I I I
            172 × 51WH
                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                VERSION
                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                        N. WW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NICH X
                                                                                                                                     H MID S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ē
```

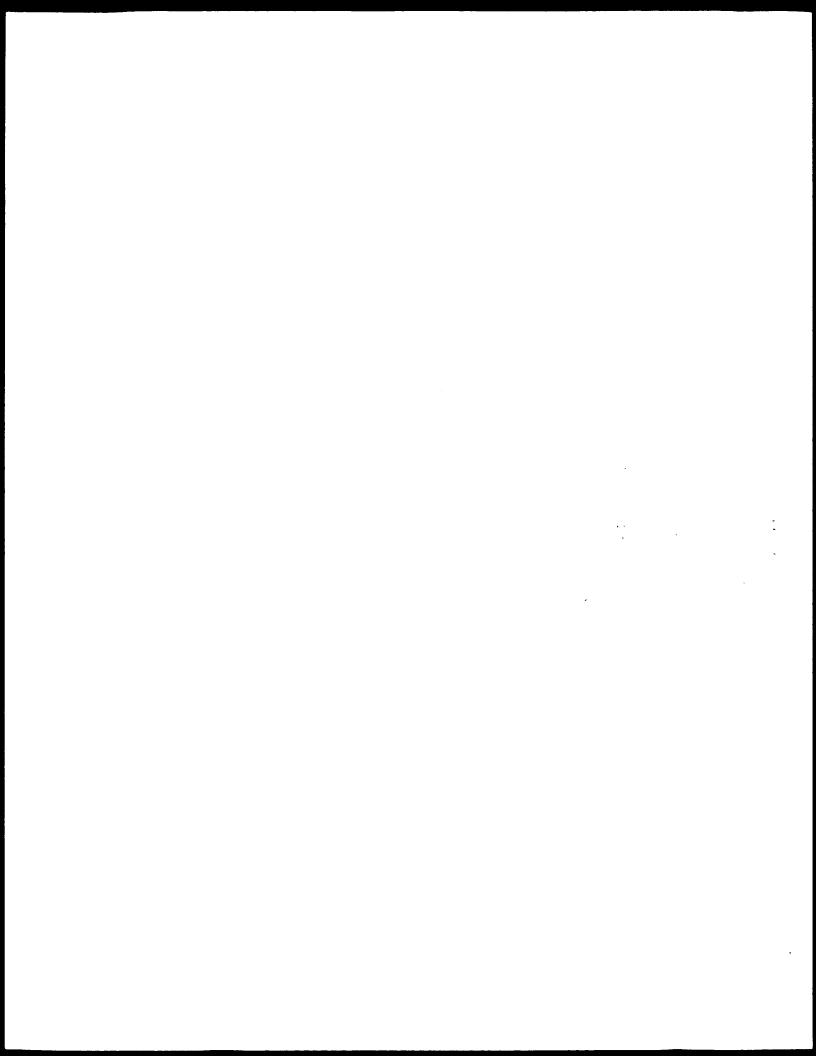
```
623392330E1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:5402622 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alsswe_type="adenocarcinoma, cell line"
[Alab_host="Dillo"] (phage resistant)"
[Anche="Aorgan liver; Werborr-prowy-spopTh; Sibe 1; Not1;
Site_2: Sali, Cloned unidirectionally; olido-dl primed.

Average insert size 1.7 kb Library enriched for full-longth clones and constructed by Life Technologies.

Also a NIE-MGC Library."
                                                                                                                                                                                                                                                                                                                                 2189 AFAITTCACCCCTGAAGGCCCAIATAAAATITCAGAAGGCCTGCCAACCAAAAA 2248
                                                                                                                                            1908 ATGCAAAGTGAAGAGATATAGAGGTTAAATTCAAAATGATTGTAAGAGGATAGAAGGATGI 1967
                                               1848 GIAIGAACICAIGAGAGACAGGCAIIIGGACGAAAIIAIGAIGIGIIGCAIGIAIGGCAI 1907
                                                                                                                                                                                                                                         1968 ICCICAEGTETETAGGAGASATETEGAATGTTTTGATCAAAGAAGAGGAGTATGATT 2027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 672)
N.H.-Mob. brig. //mgc and min gray.
National institutes of Health, Mammailan Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   553 LOTICATIONAL ACCIDATION AND STATEMENT OF THE SALES AND SALES SEED.
373 TGAGGADOCAGAATTAGAAAAATATOA KOTGGAGGGTTTTGGAGGGGGGGGGGGGAGAATGA 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19.9%; Score 660; DR 13; Length 672;
99.9%; Pred. No. 4.1e-119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plate: 14.AM12026 row: k column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone="IMAGE:5402622"
/clone_lib="NIH_MCC_90"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              High quality sequence stop: 668.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_yref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email, egaphs/rëmail,nih,qev
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BI868359.1 GI:16042032
                                                                                                                                                                                                                                                                                                                                                                                                                                   2088 HCCFHCCACCACCCCC 2105
                                                                                                                                                                                                                                                                                                                                                                                                                                                            .86.66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 671, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BI868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST.
```

70	2249		2308
40	6.1	TGACTCCAAGATCTACATCTTACTATTGTTGTTGTTTGTT	120
ć	2309	TOTAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	2368
Q	171	TCCADAAAATAAATCADATGTATGTAACAGCGACCGTGTGCTCAAAAGAAGTGCTGAAG	180
67	2369		2428
î.	181	GAAGGAAGGCTGCTAAAGGAGTGAAAAAAAGTAGGTTTGATATTGAAGGATGAGATGAAG	240
Ś	24.29		2488
136	241	CAGATGRAND AAACATGTGGGGAGGAGTGCAAATTTGAGGAGAACTGGGGAGAATGT	300
5	2489	CTTCTACTCGAACACGAATGCAAAAAGCAGAAAATGAATG	2548
35	101	CTTCTACTCGAACACGAAAGCAGAAATGAATGATAGATAG	360
$\sim y$	2549	ABBAGAGAAAALGABGAGAGCTTGG IGGAGACTGI GTACACTGIGGATTCATT	2608
Ē	46.1	AGGANGAGAAATGAGGAGGTTCAGGAGGTTGGTGGAGACGTGTGTGT	420
\ <u>`</u>	6097	GTCTCTCACAGATGTGACTGTATAACTTTCCCAGGTTCTGTTATGGCCACATTTAATAT	2668
Ē	4.21	GITTETETETETETETETETETETETETETETETETETET	480
۸٥.	2669	CTECASCRETTTTGEGGATATAAAATGEGAGATGCAATTGTTGGGTGATTGCTAAGC	2728
ŧ	481	CTTCMSCTCTTTTTGTGGATATAAAATGTGCAAGTGCAATTGTTTGGGTGATTGTTAGG	540
6.7	67.77		2787
ŧ	54.1	CACITGAAATGITAGTCATTGITATTATACAAGATGAACAATCITGITATAAATGCTGC	009
ò	2788		2847
î	601	CALITAAAAAĞI IGLAGCACACI GITTICCI CCCAAAĞI AAAA'TIGCI GCTITIATIG	099
5	2848	ATAGEAAGAATG 2859	
==	6.6.1	ATAGIARGAAIG 672	

Search completed: January 18, 2003, 04:08:48 Job time : 2939.95 sees



Copyright (c) 1993 2003 Compages Etd.

```
January 17, 2003, 18:27:24 : Scarch time 1900.38 Seconds (without alignments) 7320.587 Million cell updates/sec
                                                                                                                                                                                                I MPPRTPRAJAATAAAAABEL.....TRMQKQKMNDSMDTSNKEEK 859
nucleic search, using frame_plus_p2n model
                                                                                                                                                US 09 026-459A-43
                                                                                                                                                                           Perfect score;
ow protein .
                                                                                                                                                                                                  Sequence:
                                                 Kun on:
```

16154066 seqs, 8097743376 residues lotal number of hits satisfying chosen parameters. 0.5 7.0 7.0 BEOSTM62 Xqapop 10.0, Xqapext (Yqapop 10.0, Yqapext (Fqapop 6.0, Fqapext (Delop 6.0, belext 7 Minimum DB seq Tength: 0 Maximum DB seq Tength: 200000000 Scoring table; Searched:

| March | Farmer | Parameter | Post processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries Command line parameters:

em_qss_other:* ள்_து≲_யவி. * em_dss_mus:* em_qss_hum:* em_qss_inv:* *:mldss_pin:* em_gss_tun:* *:oid_ssp_ma *:boi_ssp_mo em_estiun:* em_estom:* em_esthum:* cm_estin:* em_cstov:*
em_estpl:*
em_estro:*
em_htc:*
qb_estl:* qb_est4:* qb_est5:* qb_est2:* qb_hte:* em_estba:* em_estmu:• qb_est.4:* db_dss:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

No. Colored								
No. Scote Match Length DH ID 1 1551 34.6 1051 13 BM561084 BM561084 2 154.5 34.7 1364 13 BM561044 AX011246 3 15.1 34.7 1364 13 BM572025 AX011246 4 1254 28.2 1001 13 BM457203 AX011246 6 1152 25.9 1001 13 BM457203 BM457203 7 114.5 25.9 1001 13 BM45703 BM450031 10 105.2 23.4 792 9 AK5971 AX7841 10 10.3 23.4 792 9 AK5973 AK7841 10 10.3 23.4 792 9 AK78438 AK78438 11 10.3 22.5 22.2 24 25.2 22.2 AK78438 12 13.0 AK86338 AK78438 AK78438 AK78438 <t< th=""><th>Res</th><th>ult</th><th></th><th>Query</th><th></th><th></th><th></th><th></th></t<>	Res	ult		Query				
1551 34.8 1051 13 BM561083 14.551084 154.5 34.7 1364 11 AK0111246 AK011246 AK01124 AK011246 AK01124	- !		Score	Match	Length	E E		
2 1544,5 34,7 1364 11 AA011246 AK011246 3 4 1254 22,5 4 1520225 4 AC520275 4 AC520277 4 AC520227 8 AC520227 8 AC520227 8 AC520227 8 AC520227 8 AC520227 AC520227 8 AC520227 8 AC520227 8 AC520227 8 AC520227 AC520227 8 AC520227 AC520227 8 AC520227		1	1551	34.8	105	13	BM56108	3 AGEN
3 1448 32.5 88 14 14264 28.5 28.1 1448 1448 1448 1448 1448 1448 14 1444 <td></td> <td>21</td> <td>1544.5</td> <td>34.7</td> <td>1364</td> <td>11</td> <td>AK011246</td> <td></td>		21	1544.5	34.7	1364	11	AK011246	
4 1254 28.2 72.7 9 AL597811 AL57811 5 1208 27.1 845 13 BM45324 BM455632 6 110.0 1001 8 1001 8 1001 8 1001 8 1001 8 1001 8 1001 8 1001 8 1001 8 1001 8 1001 8 1002 1001 8 1000 1001 1001 1001 1001 1001		æ	1448	32.5	8.61	7	BQ220275	
5 1208 27.1 815 13 8445324 BM45524 6 1120 27.1 815 13 BM455031 BM455031 7 1114.5 25.9 88.0 13 BM455031 BM456031 8 111 24.9 10.2 3 AA76441 AL564757 10 10.4 23.4 7.92 9 AL563757 AL56471 AL564757 11 10.3 23.3 6.05 9 AL563757 AL56471 AL56471 AL56477 12 10.4 23.4 7.92 9 AL563757 AL56471 AR56411 AR56411 AR56411 AR56411 AR56413		4	1254	C; 86 C;	727	ς,	ALS97811	:2
6 1152 25.9 1001 13 BM475603 RM475603 8 1114.5 25.9 1001 13 BM475603 BM475603 9 111.1 24.9 1023 3 AA763411 AA764411 1037 23.7 94.4 9 AA763411 AA764411 10 1037 23.3 605 9 AL599633 AL599633 11 1037 23.3 605 9 AL599633 AL599633 12 1030 23.1 605 9 AL599633 AL599633 12 1030 23.1 605 9 AL599633 AL599633 12 1016 22.2 10 AA763485 AL5964485 11 1037 23.1 AA764485 AM56485 12 104 AA764485 AM56485 13 114 AA764485 AM56485 14 AA7644857 AM564854 15 10		'n	1208	27.1	835	~	BM453724	BM453724 AGENCOURT
7 1114.5 25.0 880 14 REC22227 BAJ50031 9 1056.15 23.7 914 9 AA76341 AA76441 10 1043 23.7 914 9 AA76341 AA76441 10 1043 23.7 914 9 AA76341 AA76441 11 1030 23.1 694 10 BE082446 BE082846 12 1036 22.8 623 10 AA863181 AA764418 14 1016 22.8 623 10 AA868243 AA764418 16 978 22.0 788 10 AA868243 AA764485 16 976 22.1 AA7648234 AA7718548 AA7718548 17 962 21.6 784 12 BE144857 AA7186485 20 975 21 BE144857 AA7642050 AA762040 AA762040 21 860.5 21 22 34		ę		25.9	1001	13	BM475603	
111 24.9 1023 13 BM450031 BM450041 0		7	_	0.55	୍ଞଞ ୫	14	BQ222227	
9 1056.5 23.7 914 9 AA763411 AA764411 10 1043 23.3 605 9 AL569453 BEDB2846 BEDB2846 BEDB2846 BEDB2846 BEDB2846 BEDB2846 BEDB2846 BEDB2846 BEDB2846 BEDB2846 BEDB2846 BEDB2846 BEDB2846 BEDB2846 BEDB2846 BEDB2846 BEDB2846 BEDB2846 BEDB2848181 AA7648181 AA7648181 AA7648181 AA7648181 AA765818 BEDB284834 BEDB2848334 BEDB284834 BEDB28484 BEDB284834 BEDB284834 BEDB28484	œ	1111	24.9	1023	13	BM450031	BM450031 AGENCOURT	
1043 23.4 792 9 AL553757 AL554757 AL544757 AL54475	บ	5	1056.5	23.7	914	5	AA763411	
1037 23.3 605 9 A 59633 BE082846 BEORDER	٤	Ċ	1043	23.4	792	đ	AL563757	
12		Ξ	1037	23.3	605	5	AL599633	
13 1016 22.8 623 10 AMS 83181 AWF84181 14 1014 22.7 82.1 9 AA754485 AA754485 16 978 22.0 588 10 AA368234 AWF84243 16 978 22.0 588 10 AA368234 AWF84234 17 962 21.5 584 10 AA368234 AWF84234 18 952 21.5 584 12 BE149050 BF1644057 20 975 21.3 574 2 BF144857 AR164050 21 97 10 BF39278 AR164050 BF144057 22 908 20.4 797 10 BF53278 AR164050 22 969.5 19.8 572 9 AL120541 BF144057 24 87 19 872 9 AL627041 BF16094 25 860.5 19 872 10 BF231246	C	15	1030	23.1	7 69	10	BE082846	BE082846 R02-BT0
14 1013 22.7 971 9 AAN548485 AAV548485 AAV548484 AAV54844 AAV54844 AAV54844 AAV54844 AAV54848 AAV54854 AAV54854 AAV54854 AAV54854 AAV718544 BE1440050 BE1444050 BE1444050 BE1444050 BE1444050 BE1444050 BE1444050 AAV718540 BE1444050 AAV718540 AAV7185400 AAV7185400 AAV718540 AAV718540		13	1016	22.8	623	10	AW583181	AW583181 iallh09
15	C	14	1013	22.7	871	6	AA763485	AA76 1485 VW54 h01.
16 978 22.0 588 10 AM36B234 AW36B234 AW36B234 AW36B234 BL15156B BL15156B BL15156B BL15156B BL15156B AV71553B BC20.2 21.5 534 12 BC149050 BC1449050 BC1449060 BC14490 BC1449060 BC14490 BC1449060 BC14490 BC1449060 BC14490		u*:	1004	ић С1	922	c.	BC253543	80273743 6023642
17 962 21.6 736 13 H151568 BH151568 BH151568 19 959 21.4 584 10 AV715533 AV715533 20 947.5 21.4 584 10 AV715533 AV715533 20 947.5 21.4 734 12 BF144057 BF1444057 21 935 21.0 539 9 AL62790 BF1444057 22 982 20.0 572 9 AL120941 BF144097 24 872 19 BF24 18 BF144097 BF164091 24 872 19 AL120941 BF164094 BF167094 BF167094 26 85 19.5 67 12 BF167094 BF167094 27 18 18 74 19 ABF167094 BF167094 28 19 18 19 ABF26728 BF167094 BF167094 29 18 19 ABF26		16	978	22.0	588	10	AW368234	AW368234 CM3-BTO
18 959 21.5 594 10 AV715533 AV715533 19 947.5 21.4 584 12 BG1449050 BF1448050 20 947.5 21.4 584 12 BG149050 BF1448050 21 935 21.0 539 9 AL692790 BF1444857 22 908 20.4 797 10 BF18792B BF1672790 BF1672790 24 879.5 19.8 734 13 BF16768B BF167041 BF167041 25 869.5 19.5 525 12 BE24408B BF176094 BF176094 26 86.1 36.2 10 BF176094 BF176094 BF176094 27 84.8 10 AM07216 AM07216 AM07216 AM07216 29 81.5 10 AM07216 AM07216 AM07216 AM07216 21 81.5 10 AM07216 AM07216 AM07216 AM07216 AM		17	362	21.6	736	1.3	B1151568	
19 955 21.4 584 12 BG149050 BG1449050 20 97.5 21.3 734 2 BF144857 BF144857 20 97.5 21.3 734 2 BF144857 ALC92790 22 908 20.4 797 10 BE5302 ALC92790 HE539278 24 879.5 19.8 57.2 9 ALL20291 ALL202791 HE53278 25 869.5 19.8 57.2 1 BE5312.46 BLL202082 BLL202082 26 87.3 10 ARC024088 BLL202082 BLL202082 BLL202082 27 88.3 10 ARC02887 HRC100416		18	959	21.5	594	10	AV715533	
20 947.5 21.3 734 12 BF144857 BF144857 21 935 21.0 539 9 AL622790 AL622790 23 882 19.8 572 9 AL120941 BL120941 24 869.5 19.8 672 9 AL120941 BL120941 25 869.5 19.8 672 9 AL120941 BL120941 26 869.5 19.8 672 12 BE244088 BL120941 27 869.6 19.8 674 13 BL120941 BL120941 28 87.4 13 BL120941 BL120941 BL120941 29 883.4 19 AM50016 BL209484 BL209484 31 784 19.7 AM50016 AM50016 BM50017 31 752.5 16.9 A3 10 AM50017 32 752.5 16.9 A3 10 AM50017 34 <td< td=""><td></td><td>10</td><td>955</td><td>21.4</td><td>584</td><td>12</td><td>BG149050</td><td></td></td<>		10	955	21.4	584	12	BG149050	
21 935 21.0 539 9 AL692790 22 808 20.4 797 10 HE59279 23 808 20.4 797 10 HE59279 24 879.5 19.8 734 13 BL126982 BL526981 25 869.5 19.5 625 12 BE244088 BC244088 26 868 19.3 67 12 BE24085 HE504468 29 87 12 BE240887 HE704416 HE704416 29 883.5 18.7 484 10 HE702887 HE704416 20 883.6 10 AM072786 AM07272740 HE704416 AM07272740 31 751 16.9 43.8 12 HE827047 CR2238 A1646678 32 75.5 16.9 43.8 12 HE827047 CR22518 34 66.7 14 CR2304 A1646678 A1646678		0	₹		7.34	100	BF144857	
22 908 20.4 797 10 HE539278 HE539278 HE535278 23 882 19.8 572 9 A120941 A120941 24 879.5 19.8 572 9 A120941 HE53228 HE5344088 25 858 19.3 597 12 BE531246 HE16044088 HE1604049 ANGOLDBRANCOLDBR			. –	10	500	10	A: 690740	1067100 76844114 1067100 76844114
23 80 10.0 77 9 MEASSAZA 24 87 9 MILZOSAI MILZOSAI MILZOSAI 24 87 19.8 73 13 MILZOSAI MILZOSAI 25 86 19.3 57 12 MEZEG982 MAGA4088 26 19.3 52 12 MEGA4088 MAGA4088 MAGA4088 27 84 19.0 484 10 HELBRO45 HEGG945 28 83.5 18.7 646 13 HM490416 HM4400416 29 40 10 AMFO50887 ANFO507286 ANFO507286 31 751 16.9 483 13 MAGA57286 ANFO5072786 32 752.5 16.9 483 12 HE827047 CRL2044 34 683 15.3 79 14 CR2304 ANF64604 35 681.5 15.3 79 14 CR2304 CRL2040 <		, ,	000		600	, -	A07.2.7.7.0 Dec = 20.03.0	CICQUIANT OF TATOM
24 879.5 19.8 74.1 MILLEGYR: BLILLEGYR: BLILLYGURS BESTACONS BESTA		10	000	- a	157	- 0	BEG 1927 6	08-00-104 B/288-038
25 80.5 13 15.25.98.2 18.17.25.98.2 26 85.9 19.5 6.54 13 18.15.25.98.2 18.15.15.3 27 12 EE931.36 18.15.13.8 18.15.13.8 18.15.13.8 28 83.4 18.7 6.46 18.44991.6 18.15.13.8 29 83.5 18.7 6.48 18.5 18.5 18.5 31 784 18.5 18.5 18.5 18.5 18.5 18.5 31 784 18.5 18.3 9.74.46.38 18.44.52.80 18.44.53.80 18.44.53.80 18.44.53.80 18.44.53.80 18.44.53.80 18.44.53.80 18.44.53.80 18.44.66.93		10	1 1 0 0 0	0.0	1 - 2 C	h -	Alticope.	ALLEUMEN INFERDACE
22 85.8 19.3 52.5 22 BES312.46 BES34088 BES34088 BES34088 BES34088 BES34088 BES34088 BES34088 BES34088 BES34088 BES34088 BES34.5 BES312.6 BES312.6 BES312.6 BES312.6 BES312.6 BES312.8 BES3.5 B		# L	0.679	T (# L	n c	100011000	1817-180 C8637-181
25 858 37.3 37.1 25.5 12		110	800 0.00	2. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5.	0 1 0 1 1 0 1	-4 :	BG244088	
27 844 19.0 484 10 BF186095 HR168095 29 833.5 18.7 493 10 AM502887 AM702280 29 82.1 10 AM502887 AM702280 AM7022780 31 784 18.5 29 AM7022780 AM7022780 32 752.5 16.9 453 10 AM903514 AM7027280 33 751 16.9 453 10 AM903514 AM5057280 34 683 15.3 79 14 CB2304 CB2304 35 681.5 15.3 799 14 CB2304 B1669841 36 657 15.0 659 14 CB2304 B1666094 37 64 880 10 AM951604 AM951604 40 62 14.1 62 14466536 B1668839 41 62 14 16 12 B166839 B1668839 42	G	4) (10 ·	* ;	 	-4 :	BE9312.45	
28 B3.5 18.7 545 13 BM4090116 BM4090116 29 B3.5 18.7 6.5 18.3 522 9 AA072780	ပ	/7	3 0 /	9.0	484	0;	BE168045	0.LH-+AO 55049
29 824 18.5 493 10 AW02887 AW7022887 31 815.5 18.9 6.083 13 EMA56728 AN70222887 AN70222887 31 75.5 18.9 83.2 9 AN702228 AN702228 AN702228 AN702228 AN702228 AN702228 AN702228 AN702228 AN702228 AN702228 AN702228 AN702228 AN702228 AN702228 AN702228 AN70228 AN702228 AN70228		90 : 71 :	٠.	18.	545		BM490416	
340 H15, 14.3 2.52 9 AA072.782 A 784 71.6 2.683 13 BM456.7282 A 785.25 16.9 632 9 AA072.782 A 785 16.9 483 10 AW50.814 A 613 13.8 445.50 A 18.8 6.7 15.3 799 14 CB234 A 18.8 67 15.0 651 13 BF46.841 A 659 14.3 709 A 18.6 67 16.0 651 13 BF46.859 A 18.8 67 16.1 13.8 10 AW50.859 A 18.8 67 16.1 13.8 10 AW50.859 A 18.8 67 16.1 13.7 410 12 BF56.0103 A 44 6.0 13.7 410 12 BF56.0103			x 0 1	18.5	493	0.	AW502887	AW502887 U1-HF-B
31) . Yı (5 1	Y . V	04 : 54 0 14 0	÷.,	AA972788	AA072780 mm76a05.
3.2 75.5 16.9 83.2 9 A2450188 A		-	` :	٠. ١٠٠	5803	-1	BM456728	BM4567z8 AGENCOII
33 751 16.9 453 10 AWS03514 35 681.5 15.3 498 12 HF827047 36 687 15.3 651 13 BI696841 37 667 15.0 651 13 BI696841 38 637 14.3 709 9 AIA46047 39 633 14.2 425 10 HF285796 40 626 14.1 521 12 HF466536 42 625.5 14.0 387 12 BF99890 43 613 13.8 415 9 AI745644 AA 601 13.7 411 12 BF560103		na i Mili	n.	16.9	832	Ö	A1646938	Al646338 vw54a10.
34 683 15.3 438 12 HF827047 HF827047 35 681.5 15.0 651 13 BI696841 DI696841 DI696841 37 659 14.8 380 10 AW951604 AW951604 AW951604 38 637 14.2 709 A 7646097 A A 40 b2W 14.2 425 10 HE285796 HC88759 HC88759 41 b2W 14.1 52.1 12 H666536 HC66536 HC766536 42 b2.5 14.1 52.1 12 BF96639 HC766536 43 b2.5 13.3 415 9 A1745644 A1745644 A1745644 4 b1 13.7 410 A 7745643 A1745644 A1745641		m m	751	16.9	453	0-	AW503514	AW504514 U1-HF B
35 681.5 15.3 799 14 CB2304 CR2304 CR2504 CR2504 CR2504 CR2504 CR2504 CR2504 CR2504 CR2504 CR2507 <	บ	34	9	15.3	438	12	~	BF827047 RC3-BN0
36 667 15.0 651 13 B1696841 B1696841 B1696841 B1696841 B1696841 B1696841 B1696841 B1696841 B1696841 B1696841 B1696841 B1696841 B1696841 B1696841 B1696841 B169687604 B166097 W. 39 633 14.2 425 10 R1285796 R1868359 R18683		22	8	15.3	799	14	C82304	CB2304 CB2304 Le
37 659 14.8 380 10 AW951664 AW951664 38 637 14.3 709 9 A1646097 A166637 A166637 A166636 A166636 <td></td> <td>36</td> <td>299</td> <td>15.0</td> <td>651</td> <td>13</td> <td>BI696841</td> <td>BI696841 603344967</td>		36	299	15.0	651	13	BI696841	BI696841 603344967
38 637 14 3 709 9 AFA66097 A A646097 V 39 633 14.2 425 13 H868359 H868359 H87285796 H868359 H868359 H868359 H868359 H868359 H868359 H8465546 42 625.5 14 3 36 7 2 17 45644 A 4 611 13.7 410 12 EF560103 A 7745644 A 660 13.7 410 12 EF560103 A 7745644		37	629	14.8	380	10	AW951604	
39 633 14.2 425 10 HE285796 HU285796 40 628 14.1 672 13 H1868359 H1868359 41 626 14.0 387 12 BF968390 HF968390 43 613 13.8 415 9 A1745644 A1745644 A1745644 4 611 13.7 410 12 RF560103 A1745641 A5 606 13.7 410 A1745641 A1745641 A1745641		38	637	14 3	709	σ	I K4	>
40 626 14.1 672 13 H1868359 42 626 14.1 521 12 H466536 43 625.5 14.0 387 12 BF998390 43 613 13.8 415 9 A1745644 44 611 13.7 410 12 BF560103		36	633	14.2	425	10	BE285796	
41 626 14.1 521 12 HF466536 42 625.5 14.0 387 12 BF598390 43 613 13.8 435 9 AI745644 44 611 13.7 4410 12 BF560103 45 600 13.7 4410 0 AI745641		4	97G	14.1	672	1.3	B1868359	B1868359 60339233
42 625.5 14.0 387 12 BF998390 43 613 13.8 415 9 AI745644 A 44 611 13.7 410 12 BF560103 AE 600 13.7 410 0 AI7456A	ပ	4 1		14.1	E. C.	-	HF466536	HF466536 UI-M-CG
43 613 13.8 415 9 A745644 44 611 13.7 410 12 RF560103 45 600 13.7 410 12 A724543	Ų	42	C.	14.0	387	15	BF998390	BF998390 CM2-GN016
44 611 13.7 410 12 BF560103 45 600 13.7 411 0 A1745643	Ç	43	613	13.8		σ	AI745644	AI745644 tr24b06.
45 600 12 7 411 0 NIZASEAL	O	44	611	13.7	-		BF560103	BF560103 UI-R-A1.e
			000					

y.
'n
ξ
"
٧

1051 bp mkNA Lincar EST 20 FEB-2002	ACRANORRE, ASAGIBBE NIH MGC - 67 Homo sapiens cona cione imagr: 5550905 S. mRNA sequence. RMASIORR	GI:18806043	S	Eukaryola; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo	1 (bases 1 to 1051) NIH-WGC bttp://mgc.nci.nih.gov/. National Institutes of Health, Mammallan Gene Collection (MGC)
HM561083	AGENCOGRE_AS66133 NIH_ 5', mRNA sequence. RMS61083	BM561083.1 GI:18806043	human. Homo sapiens	Eukaryota; Metazoa; Ch Mammalla; Eutheria; Pr	<pre>1 (bases 1 to 1051) NIH-MGC http://mgc.nci National Institutes of</pre>
RESULT 1 BM561083 LOCUS	DEFINITION	VERSION	SOURCE		REFERENCE AUTHORS TITLE

```
d
                                                                            ċī
                                                                                                                   â
                                                                                                                                                          ő
                                                                                                                                                                                               3
                                                                                                                                                                                                                                      ć
                                                                                                                                                                                                                                                                           £
                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                       Ë
                                                                                                                                                                                                                                                                                                                                                                                                \dot{z}
                                                                                                                                                                                                                                                                                                                                                                                                                                 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                        /nite "Program ope, Varior providente, Sinella Nort, Site_2: Sall, Cloned unidirectionally. Primer: Oligo dT. Average insert size 1.75 Kb. Library constructed by Life
                                                                                        CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by. Aaracourt Bioscience Curporation
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       124 TITAGCAAACTICIGAAIGAGACALITICATATGICTITATIGGOGTGOGFIGITGAG 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  424 ValValMetAlaThrTyrSerArgSerThrSerGlnAsnLeuAspSerGlyThrAspLeu 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          984 TyrTyrArqValMetGluSerMetLeuLysSerGluGluGluArqLeuSerTleGlnAsn 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              444 SerPheProTrp11eLeuAsnValLeuAsnLeuLysAlaPheAspPheTyrLysVal11e 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   594 IleLysGlnSerLysAspArqGluGlyProThrAspHisLeuGluSerAlaCysProLeu 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          424 ATTAAACAATGAAAGGAQQGAGAAGGACAAQTGATGACQTTGAATGTGGTTGTCTTT 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   364 AlaValGlyGlnGlyCysValGluIleGlySerGlnArgTyrLysLeuGlyValArgLeu 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               64 TATTACCGAGTAATGGAATGCATGCTTAAATCAGAAGAAGAAGGATTATCCATTCAAAAT 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    404 PheSeriysLeuLouAsnAspAsn!leFheHisMetSerLouLouAlaCysAlaLouGiu 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          484 CluSoroberladiaCluClyAsorouThrArgGluMetIleCysHisLeuGluArg 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       484 CysGluHisArgIleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeu 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            864 IGIGAACAIGGAATCAFGGAAFCCFFGCATGGCTCTCAGAFFFGAGFFFFACFFFFAFFFFGAFFFF 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 524 Asni.euProl.euGinAsnAsnHisThrAlaAlaAspMetTyrLeuScrProValArgSer 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 others
                                                                          CDNA Library Proparation: Life Technologies, Inc
                                                                                                                                                  found through the I.M.A.G.B. Consortium/ILINI at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   312
6
18
5
1
                                                                                                                                                                                                                                                                                                                                                                        /lab_host="DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                       /lissue type="retinoblastoma"
                                                                                                                                                                                                                                                                                                                                                                                                                               Average insert size 1.75 kb.
Technologies."
221 c 197 q 299 t.
                                                                                                                                                                                             Plate, LLAM12263 row. m column: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-026-459A-43 (1-859) x BM561083 (1-1051)
                                                                                                                                                                                                                                                                                                                                 /clone_lib-"NIH_MGC_67"
                                                                                                                                                                                                                    High quality sequence stop: 737.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                          /clono-"IMAGE:5550905"
                                                                                                                                                                                                                                Location/Qualifiers
1. 1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2.64e-144
1551.00
93.26%
91.50%
34.83%
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                           SOULCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ..
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
JOURNAL
                                                                                                                                                                                                                                    FEATURES
              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ĝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \geq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
```

```
HTC 19-JAN-ZUU2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Shibata,K , Itoh,M , Aizawa,K , Nagaoka,S., Sasari,N., Carninci,P., Konno,H., Akiyama,J., Nishi,K., Kitsunai,T., Tashiro,H., Itoh,M., Sumi,N., Ishii,Y., Nakamura,S., Hazama,M., Nishino,T., Harada,A., Yamami,C.,R., Matsumcto,H., Sakaguchi,S., Ik-yami,T., Kashiwaqi,K., Fujiwake,S., Inone,K., Toqawa,Y., Tzawa,M., Ohara,E., Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayashizaki,Y. RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa, Chordata; Craniata, Vertebrata, Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AK011246 1364 bp mRNA linear HTC 19-JAN-ZL Mus musculus 10 days embryo whole body CDNA, RIKEN full-length enriched library, clone:2600017M22:retinoblastoma 1, full insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,E., Ifoh,M., Konro,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y. Normalization and subtraction of cap-trapper-selected cONAs to prepare full-length cDNA libraries for rapid discovery of new Genome Pes. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         624 GlucouMctArgAspArgHislouAspGlnlleMctMctGysScrMctTyrGly:lcCys 643
                                                                                                                                                                                                                                                            584 LysVallyrArgLcuAlaTyrLcuArgLcuAsnThrLeuCysGluArgLcuLeuSerGlu 603
                                                                                                                                                                                                                                                                                                                                                                                 724 CACCCAGAATTAGAACATATCATCTGGACCCTTTTCCACCACACACCCTGCACACATAT 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        £ 43
                                                                                                               564 ThrSerAlaPheGlnThrClnLysProLeuLysSerThrSerLeuScrT.cuPheTyrLys 583
                                                                                                                                                                     ACCICIANDELLINEAGACTORGAMOTATIGAAALCIACCICICITICATICATITATAAA 663
                                                                                                                                                                                                                                                                                                                                          604 HisProGluLeuGluHisIleIleTrpThrLeuPheGlnHisThrLeuGlnAsnGluTyr 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        683 IleIleVal-----PheTyrAsnSerValPheMetGlnArgLeuLysThrAsnile 699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (strain.CS7RL/61) 10 days cmbryo cDNA to mBNA, clone_lib:RIKEN full-length enriched mouse cDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     784 GANCHCATGAGAGACANTTTGGACANTATGGATATGTGTGTGTGTATGTATGTGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          663 offisAlaValGlnGluThrFheLysArgVal LeuTieLysGluGluGlu TytAspSer
544 ProLysLysLysClySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGlnAla
                                                                                                                                             High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
99279253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1364 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Carninci, P. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AK011246.1 CI:12847243
HTC; CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       clone:2500017M22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sednence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AK011246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESS ION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
AK011246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TO STRUME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOTTRUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ä
```

```
Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          合
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Arakawa, T., Baldarelli, R., Bono, H., Broomstein, M., Baldarelli, R., Bono, H., Broomstein, M., Baldarelli, Carninci, P., Fukuda, S., Fukuda, S., Fukuda, S., Fukuda, Bono, H., Broomstein, M., Banagaki, T., Haraka, H., Hayatsu, N., Hill, D., Hiramoto, K., Hiraoka, T., Hori, F., Hume, D., Imofani, K., Ishi, Y., Itoh, M., Kayaka, T., Kato, H., Kawai, J., Kojima, Y., Konno, H., Koya, S., Karihara, C., Matsuyama, T., Miyazaki, A., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Sakai, F., Salio, H., Salio, R., Shibata, Y., Shibata, A., Shiraki, T., Shibata, K., Shibata, Y., Shibata, A., Shiraki, T., Yamanaka, I., Yashida, K., Yoshida, K., Yashida, K., Yashida, K., Yashida, K., Yoshida, K., Yamanaka, I., Yamanaka, I., Yamanaka, I., Kashida, K., Yoshida, K., Yashida, Yashida, K., Yashida, 
                                                                                                                                                                                                                                                                                                                                        Audinath, Indeadain, Ministrian introduction international control of observative. Ministrian international control of observative international control of observative international control of observative international control of observative international control of observative international control of observative international control of observative international control of observative international control of observative international control of observative international control of observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative international control observative internati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Marchisonni, L., Mashima, J., Mazzarelli, J., Mondaetts, P., Rordone, P., Rong, B., Ringwald, M., Rodriguez, L., Sakamoto, N., Sasaki, H., Sato, K., Schonbach, C., Seya, T., Shibata, Y., Storch, K.F., Suzuki, H., Toyo oka, K., Wang, K.H., Weitz, C., Whitaker, C., Wilming, L., and Huyashizaki, Y. Yoshida, K., Haseqawa, Y., Rawaji, H., Kohtsuki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  prepare mouse tissues. First strand cDNA was primed with a primer by condendadadated according the property of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of the strand control of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib-"RIKEN lull-length enriched mouse cDNA library"
/dov_staqe-"10 days embryo"
1. .1864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Physical and Chemical Research (RERN) Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Veolama Institute: 1.7.22 Suchito-cho, Tsurumirku, Yokohama, Rangawa 240-045, Japan (E-mail:genome-res<sup>eqse</sup>: riken.go.]p. (HR:http://eerome.as.riken.go.]p. (HR:http://eerome.as.riken.go.]p.
                                                                                                                                Kawai,J., Shinaqawa,A., Shibata,K., Yoshino,M., Itoh,M., Ishii,Y.,
Arakowa,T., Hara,A., Pukunishi,Y., Konno,H., Adachi,J., Fukuda,S.,
Aizawa,K., Izawa,M., Nishi,K., Kiyosawa,H., Kondo,S., Yamanaka,I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA library was prepared and sequenced in Mouse Genome
Encyclopedia Project of Genome Exploration Research Group in Riken
Genomic Sciences Center and Genome Science Laboratory in PIKEN.
Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Please visit our web site (http://genome gse riken go jp/) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref-"FANTOM_DB:2500017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref-"MGD:MGI:1905260"
/db_xret-"taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local ion/Onaliliers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone-"2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /strain-"C57HL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 1464)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HOST: SOLR.
11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21085660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11217851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BOULCE
        PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTLE
JOSTRNAL
                                                                                                                                                        AUTHORS
                                                                                XIIXIIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMISS
```

denie.

```
ETEEPEFTALÇOKTIKVPDHVRERAWITIWEKVSSVINCTTEGYFÜKKKELIMOTOTETAAV
DIDEMPETFTELOKSTELSVYNEFFULINETDISTNVINNAMSKILINNYNVIKALYSKELE
                                                                                                                                                                                                                                                                                                    RICELIYLIQPSSALSIEINSMLVLKISWIIFLLAKGEVLQMEDDLVISFQLMLCVVD
                                                                                                                                                                                                                                                                                                                        YFIKESPPALLÆEPKITAALFINSSPPTFRRGONFSAFIAKQLENITFITEVLCKEHE
CNIDEVKNVYFKNFIPFINSIATVSSNGLPEVESISKRYFEVYLKNKILDARLFLDHD
                                                                                                                                                                                                                                         /translation="MPPKAPKKAAAAEPPPPPPPPKEDPAQDSGPEELPLARLEFE
                                                                                                                                                                                                                                                                                                                                                                KTLQTDP1DSFETERTPRKNNPDEEANVY1PHTPVRTVMNT1QQLMV11.NSASDQPSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81 ValSerSerValAspSlyValLeuGlyClyTyrllcClnLysLysLysCluLcuTrpCly 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            473 GITICALCOTGGATGGAATCCTGGAAGGATAIATICAAAAGAAGGAAGGAACTCTGGGGC 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             433 AFCHGGAFGFFFFFARGGGAGGFFGAFGFFAGAFGGGGAFFGAGTTTTACFGAGGFA 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  553 ASTACTAGGGTGATGATGTGTCAAGACTATGAAGAAGTATATGTGTTATGTGCA 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        673 ITATCTACTGAAATAAATTCTATGTTGGTGCTAAAAATTTCTTGGATCACTTTTTTACTA 732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      132 AlabysGlyGluValLeuGlnMetGluAspAspLeuVallleSerPhedlnLeuMetLeu 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21 ProAlabroProProProProProProGlaSLaAspProGlaSLaAspGreStyProGla 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41 AspLeuProLeuValArqLeuGluPheGluGluThrGluGluProAspPheThrAlaLeu 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 CysGlnLysLeuLyslleProAspHisValArgGluAraAlaTrpLeuThrTrpGluLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zhote-"data source:MGD, source key:MGI:97874,
                                                                                                                                                                                                                                                                                                                                                                                                           0.10118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     294
114
117
275
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101 IleCysllePhelleAlaAlaValAspLeuValGlu···
                                                                                                                                                                                                                                                                                                                                                                                                           146.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                    /proteln_id="BAB27493.1"
/db_xrel="G1:12847244"
/db_xrel="MGD:MG1:97874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-026-459A-43 (1-859) x AK011246 (1-1464)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (3dbs)
                                                                                                                                                                                                                                                                                                                                                                                                       307 q
                                                                                                                                retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                       NETSYFUNCTIONE
                                                                                                                                                    /codon_start-l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.730-143
                                                                                       evidence: ISS
                      151. .>1364
/qene-"Rb1"
/gene-"kbl"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1544.50
                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       77.568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 34.68%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                             ₹
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                         RASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                        SOS
                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score:
```

```
1448.00
98.308
97.968
32.528
                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
                                                                                                                                                                                          313 a
                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                               Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                    ..
S
                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      319
                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                    Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ė
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   겊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              :<del>.</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               БÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       겫
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HQ220275
AVENYORRETTSEST VIH_MOC_92 Home sapiens obnA elone IMACH:6044522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota: Metazoa; Ohordata: Oraniata: Vertebrata; Euteleostomi;
                                                                                                                                                                     854 ACAGCIGCACTCCCCATTAAIGGITCAGCTCGAAGACCCAAAAAGAGTCAAAAAAGAGAGAC 912 🔹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1888 TAIGAAWAAGITIAICTIAAAAAAAAAAAAAAAATTIAAATGAAAAATGIIIITGAAIAAAAAA 1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1) HILLITTI HILLITI (1) HILLITI (1) HILLITIHILITIHILITIHILITIHI
                                                                                                                                                                                                                                                                                                                     97 ± CACGAGTGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATTTTATCCTTTTTAT 1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: May clone distribution intermetion can be found through the 1.M.A.G.E. Consortium/LLNE at: Plate: LLAM18287 row: e column: 03
19.2 CysVallacAsplyrthellelysicaScritchroMethaulectysGlabroTyrlys 171.
111111:::111111111111111
                                                                                           192 AlaArulleAlaLysGlnLeuGluAsnAspThrArqIleIleGluValLeuCysLysGlu 211
                                                                                                                                                                                                                                                                                z12 HisGludysAsmileAspCluValigsAsmVal%grahetgsAsmPhc1JeProPheMet 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              292 AsnLeuAspGluGluValAsnValIleProProHisThrProValArgThrValMetAsn 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      412 ThriledinGlnLeuMetMetIleLeuAsnSerAlaSerAspGlnProSerGluAsnLeu 331
                                                                                                                                172 ThrAlaValIIeProIIeAsn@lySerProArqThrProArqArqGlyGlnAsnArqSor 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            l (bases i to 881)
NIH-MGC http://mgc oci mih gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                              252 Tyrktoli ileTyrLeuLysAsnLysAspLeuAspAlaArgLeuPheLeuAspHisAsp
                                                                                                                                                                                                                                                                                                                                                          242 AsnSerLeuGlyLeuValThrSerAsnSlyLeuPrcGluValGluAsnLeuSerLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .72 (ysthrtoglnThrAspSer:LeAspSerPheGluThrCinArgThrProArgLysSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GNNA Library Propatation. Life Technologies, inc. chNA Library Arrayed by: The Limia C.E. Consertium (IINE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                     1444 ATTICCTACTICAAIAATIGCACAGIGAAT 1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            442 ileSeriyrPheAsnAsnCysThrValAsn 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               High quality soquence stop.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tissue Producement, AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BQ220275.1 GI:20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5', mRNA sequence.
BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Southern
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MET NIT A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRUANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESS ION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEFFKEN E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                           <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \stackrel{>}{\circ}
                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                          \hat{z}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1
```

/organism-"Homo sapiens"

```
/Lissue_type="embryodal catchoums, cell line"
/lab_host="DH10H (phage=resistant)"
/note=-3cragn=restis; Verfor profive-sprprf; Site_1: NotI;
Site_2: Sali; Cloned unidirectionally; Oligo dT primed.
Average insert sice 2.5 kb. Library enriched to:
full-length clones and constructed by Life Technologies.
Note: this is a NH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         379 LeuglyValArgLeuTyrTyrArgValMet.GluSerMet.LeuLysSerGluGluGluArg 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 179 GlySerProArgThrProArgArgGlyGlnAsnArgSerAlaArgIleAlaLySGlnLeu 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      199 GluAsnAspThrArgIleIleGluValLeuCysLysGluHisGluCysAsnIleAspGlu 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          299 VallleProProHisThrProValArqThrValMetAsnThrIleGlnGlnLeuMetMet 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IleLeuAsnSerAlaSerAspGlnProSerGluAsnLeuIleSerTyrPheAsnAsnCys 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                543 AIIIIAAAIICAQCAAGIGAICAAQQIIQAGAAAAIQIGAIIIGCIAIIITAACAAQIGG 602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      359 (1):LysPhoAlaLysAlaValOlyCloClyCysValGluILeGlySerGlnArgTyrLys 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    139 MetGluAspAspLeuVallieSerFheGluLeuMetLeuCysValLeuAspTyrPhelle 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          239 SerAsnGlyLeuProGluValGluAsnLeuSerLysArqTyrGluGluIleTyrLeuLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              183 GAAAATGATACAAGAATTATTGAAGTTCTCTGTGTAAAGAACATGAATGTAATATAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          259 AsnLysAspLeuAspAlaArqLeuPheLeuAspHisAspLysThrLeuGlnThrAspSer
                                                                                                                                                                                                                                                                                    881
1288
133
023
                                                                                                                                                                                                                                                                                                       Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                Mismatches:
                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                      Length:
               /clone="IMAGE:6044522"
/clone_lib="NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                             US-U9-026-459A-43 (1-859) x BQ220275 (1-881)
/db_xre1-"taxon:9606"
                                                                                                                                                                                                                                                                                    4.090-134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ó
```

```
62 AATAGAGTTTGTGAAGGGGTTGTGTGTGAGGAGGGAGAGALTAGAAGALALGAGGG 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High quality sequence stop: 647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BM453724
BM453724.1 GI:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               814 AspGiu 815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  722 GATGAA 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEPTINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COCUS
                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                      ó
                                                                       q
                                                                                                                                                                                  ò
                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                   qc
                                                                                                                                                                                                                                                                                                                                                                                                          ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ο̈́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                         Poustka,A., Wellenrouther,R., Mewes,H.W., Weil,B. and Wiemann,S.).
EST (Poustka,A., Wellenrouther,R., Mewes,H.W., Weil,B. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Heidelberg/Germany) within the cDNA sequencing consortium of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mote-"Vector: pTriplEx2; Site_1: SiilA; Site_2: SfilB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No st sequence available.
This clone (DKFZp31300816) is available at the KZPD in Herlin. Please contact the KZPD: Ressourcenzentrum, Heubnerweg 6, 14659 Herlin-Charlottenburg, GERMANY; Email: clone@rzpd.de.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKFZ), Email S.Wiemann-JdKfz-heidelberg.de,
sequenced by DKFZ (German Cancer Research Center,
                                  974 TyssorThrsetLeuserLeuthefyrLysLysValTyrArgLeuAlaTyrLeuArgLeu 593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      594 Asnibilaar'ysdiuAfqiaalauSerGluHisProGluIcuGluHisTlelletrpfhr 613
7.2.8 CLIGGAGIIGGCIIGIALIACCGATAATGGAAICCAIGGTTAAAIGAGAAGAAGAAGA 782
                                                                       78 1 TTATCCATTCAAAATTTTAGCAAACTTCTGAATGACCACATTTTTTCATATGTCGTTTAT 842
                                                                                                                                                                                                                                     DKFZp1180B16_rl 114 (synonym: blcc2) Homo sapiens cDNA clone DKFZp1180B16 5', mkNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 AAATCTACCTCTTTCACTGTTTTAIAAAAAGTGTATCGGGTTATCTCGGGTTA 61
                                                                                                                                                                                                                                                                                                                                                                                     Mammalia: Eutheria: Primates; Catarrhini; Hominidae; Homo.
1 (bases 1-10-727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             727
241
0
0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Department Lehrach
Max-Planck-Institute for Molecular Geneties
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence of the clone insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib-"313 (synonym: hlee2)"
/dev_staqe-"adult"
/lab_bost-"pH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: poustka@mpimg.berlin-dahlem.mpg.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
Mismatches:
                                                                                                          418 cuAlaCysAlaLcuCluValValMctAlaThrTyrSer 430
                                                                                                                            Thuestrasse 73, 14195 Herlin, Germany
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       198 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US 09 026 459A 44 (1 859) x ALS97811 (1-727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:9606"
/clone="pKFZp31300816"
                                                                                                                                                                                                                   727 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 30 et
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CUNA COllection"
                                                                                                                                                                                                                                                                                         ALS97811.1 GI:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Ponstka A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       German Genome Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       +49-30-84131624
+49-30-84131128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1254.00
99.598
99.598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7.80-115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28.16%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This is the 5'
                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rost Local Similarity:
                                                                                                                                                                                                                   A1.597811
                                                                                                                                                                                                                                                                            AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                       NOT LINIATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HASE COUNT
                                                                                                                                                                                                                                                                                                                                                   SKIANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ž
                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  THIRMAL
                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                RESOLT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                AL597811
                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                               37 E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ... MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
Т. — Э.
                                                                                                                                                                                                               17 0 10 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P1 1-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                            5
```

```
BM453724 835-PP 2002
AGENCOURT_6402743 NIH_MGC_72 Home Sapiens CDNA clone (MAGE:5528814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryola, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                              654 IlelleValThrAlaTyrLysAspLeuProHisAlaValGlnGluThrPheLysArgVal 673
                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                674 LeulleLysGluGluGluTyrAspSerIleIleValPheTyrAsnSerValPheMetGln 693
                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  694 ArgleulysThrAsnlleLeuGlnTyrAlaSerThrArqProProThrLeuSerProTle 713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              714 ProHisileProArqSerProTyrLysPheProSerSerProLeuArq11eProG1y01y 743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           422 CCTCACATTCCTCGAAGGCCTTACAAGTTTCCTAGTTCACCTTACGGATTCCTCAGAGG 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   542 ACAAAAATGACTCCAAGATCAAGATCTTAGTATTGAATTGGTGAATCATTCGGGACTTCT 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          774 GluLysPheGlnLysIleAsnGlnMetValCysAsnserAspArqValLeuLysArqSer 793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            794 AlaGluGlySerAsnProProLysProLeuLysLysLeuArqPheAspIleGluGlySer 813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA Sequencing by: Agencourt Hioseience Corporation
Clone distribution: MGC clone distribution information can be
Lound through the L.M.A.G.E. Consortium/LLNL at:
                              634 llemetMetCysScrMetTyrGlylleCysLysValLysAsulleAspLeuLysPheLys 653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            National Institutes of Health, Mammalian Gene Collection (MGC)
614 LeupheGluHisThrLeuGlnAsnGluTyrGluLeuMetArqAspArqHisLeuAspGln 633
                                                                                                                                       754 ThriysMetThrProArgSerArglleLeuValSerTleGlyGluSerPheGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plate: LLAM12206 row: e column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: cqapbs-r#mail.nih.qov
Tissue Procurement: ATCC/DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 835)
NIH MGC http://mgc.nci.nih.gov/
```

```
**1 ThroloAlaThrSerAlaPheGloThrGloLySProLeuLySSerThrSerLeuSerLeu 580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             501 PheAspLeuIleLysGluSerTysAspArgGluGlyProThrAspHisLeuGluSerAla 520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541 ValArqSerProLysLysLysGlySerThrThrArqValAsnSerThrAlaAsnAlaGlu 560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            641 ClylleCystysVallysAsnileAspleatysPhetysTlelleValThrAldTyrLys 660
                                                                                                                                                                                                                                                                                                                                                                                                                             481 LendluArgCysGluHisArgIleMetGluSerLeuAlaTrpLeuSerAspSerProLeu 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                88 GIAAGAIGICCAAAGAAAAAGGIICAACIACGCGGGGAAATTGTAGTGCAAATGCAGAG 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ### ACACAASCAACCTCASCCTTCCASAACCAGAAGCCATIGAAALCIACCTCTTTCACTCTTCACTG 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601 LeuSerdluHisProdluLeuGluHisIleIleTrpThrLeuPheGlnHisThrLeuGln 620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         621 AsnGluTyrGluLeuMetArqAspArgHisLeuAspGlnIleMetMetCysSerMetTyr 640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661 AspteuProHisAlaValGlnGluThrPheLysArgValLcuIleLysGluGluGluTyr 680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            308 TITTATAAAAAAGIGTATCGGCTAGCCTATCTCCGGCTAAATACACTTTGTGAACGCCTT 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        488 GGCATATGCAAAGTGAAGAATATAGACCTTAAATTCAAAATGTTGTAACAGCATACAAG 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            548 GALCITCCTCATGCTCTTCAGGAGACATTCAAACGTGTTTTGATCAAAGAAGAGGAGTAT 607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            681 AspserIleIleValPheTyrAsnSerValPheMetGlnArgLeuLysThrAsnIleLeu 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                701 GInlyrAlaSerThrArgProPro ThrLeuSerProlleProHisile-ProArgSe 719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8 GICCGACGATGAACATGAATATAATAATAATAATGCTTGCATGCCTCTCAGATTCACTTTA 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              521 OystrolouAsnLeuProLeuGlmAsnAsnHisThrAlaAlaAspMetTyrLeuSerPro
                                                                                                                                                                                                        1 others
                                                                                                                                                                                                                                                                          835
244
5
12
7
                                                                                                                                                                                                                                                                                                         Conservative:
Mismatches:
                                                                                                                                                                                                        233 t.
                                                                                                                                                                    Average insert size 2 kb.
Technologies." 210 c 137 g 233 t.
                                                                                                                                                                                                                                                                                          Matches:
                                                                                                                                                                                                                                                                        Length:
                                                                                                                                                                                                                                                                                                                                           indels:
                                  /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                             26.459A-43 (1-859) x BM453724 (1-835)
                                                /db_xref="taxon:9606"
/clonc="IMA3D,5528B14"
Location/Qualitiers
                                                                                                                                                                                                                                                                        3.81e-110
1208.00
                                                                                                                                                                                                                                                                                                          dj d]∯
                                                                                                                                                                                                                                                                                                                         4] ∩4*
                                                                                                                                                                                                                                                                                                                                            27.138
                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
                                                                                                                                                                                                                                                                                                          Percent Similarity.
                                                                                                                                                                                                                                                          Ailthmont Scores:
                                                                                                                                                                                                                                                                                                                                       Query Match:
                 SOUTHOR
                                                                                                                                                                                                      SASE C UNI
                                                                                                                                                                                                                                                                        ŝ
FEATURES
                                                                                                                                                                                                                      R1.31N
                                                                                                                                                                                                                                                                                        Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ê
```

```
HM4756U3
AGENCOUPT_6480007 NIH_MGC_92 HOMO SAPIENS CDNA CLONE IMAGE:5575683
                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryola, Metazoa, Chordata, Craniata; Vertebrata; Euteleostomi: Maxmalia, Eutheria, Frimates, Cataithiai; Hominidae; Homo. 1 (Pascas 1 to 1001)
NHH-MGC http://mgc.ncl.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /Lissue_type="embryonal carcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
/note="Organ: testis: Vector: pCMV-SPOR16: Site_1: Not1;
Site_2: Sali; Cloned unidirectionally; oligo dI primed.
Average insert size 2.5 kb. Library enriched for full.length clones and constructed by Life Technologies.
Intl: Length clones and constructed by Life Technologies.

178 c. 186 g. 288 t.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDNA Library Picparation. Life Technologies, Inc. CDNA Library Arrayed by: The T.M.A.G.B. Consortium (LLNL.) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found 1 thought the T.M.A.G.E. Consortium/LLNL at: http://mage.lln.gov
                                           728 CCCCTTACAAGTETTOOTTAGILLOAGOGTTOAGGGAATICCCTGGGAAGGGAAGGAICC 787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93 GiniystystystystluteuTrpClyfleCysflePhellcAlaAlaValAspLeuValClu 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              113 SerThrGluIleAsnSerAlaLeuValLeuLysValSerTrpIleThrPhcLeuLeuAla 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          133 LysClyCluValLeuGlnMetGluAspAspLeuVallleSerPheGlnLeuMetLeuCys 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     132 GAAAGGACACGTGAACTT------ATATATTTTGACACAAACCCAGGAGTTCGATA 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           719 rProTyrIys---PheProSerSerProLeu---ArdIlePro---GlyGlyAsu---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism-"Homo sapiens"
/db_xrcf "taxon.9606"
/clone-"IMAGE:5575683"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-026-459A-43 (1-859) x RM475603 (1-1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence start: 17
High quality sequence stop: 734.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib-"NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tissue Procurement: ATCC
                                                                                            735 - HeTyrileSerProLeutys 741
                                                                                                                                       788 IAIAIIIICAACCCCTGGAA 809
                                                                                                                                                                                                                                                                                                                         HM475603.1 GI:18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 98e-104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1152 00
90.43%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 85.82%
25.87%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1999)
                                                                                                                                                                                                                                                                          5', mRNA sequence.
BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .1001
                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                           numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                   RESULT 6
                                                                                                                                                                                                         RM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred.
                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
```

```
BQ222227
AGENCOURT_7566045 NIB_MGC_92 Homo sapiens cONA clone IMAGE:6041563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bukaryota; Metazoa, Chordata, Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                         25. ChallattetyttentysAsntysAsptenAspAlaArgteuPietenAspHtsAsptys 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | (bdsos 1 to MRD)
NJH MGC http://mgc.nci.nih.qov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                chNA Library Preparation: Life Lechnologies, Inc.
chNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
bun Sequencing by: Agenciour Biosciènce Corporation
clone distribution: MGC clone distribution information can be
15.4 ValleuAspTyrPheIleLysLeuSerProProMetLeuLeuLysGluProTyrLysThr 172
                                         7.4 AlaValileProfleAssadySerProArgThrProArgArgGlyGlnAsnArgSerAla 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        213 @UCYSAsnileAspGluValLySAsnValTyrPheLySAsnPheIleProPheMetAsn 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      244 SertenglyLeuValThrSerAssSlyLeuProGluValGluAsnLeuSerLysArgTyr 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           500 GAAGAAATITATCITAAAAATAAAGATCIAGATGAAGAITAITITIDGATGATAAAA 659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        273 ThrieudinThrAspSerIleAspSerPhedinThrdinArgThrProArgLysSerAsn 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29 / LeuAspGluGluValAsnValIleProProHisThrProValArgThrValMetAsnThr 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41.4. The find in Leumet Metilie Leuchsn Ser Ala Ser Asp Gin Pro Ser Glu Asn Leuille. 33.2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80 ATCCAACAATTAATGATGATTTTAAATTCAGCAAGTGATCAACCTTCAAAAAALCCGATT 859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              33 SerTyr-PheAsnAsnCysThrVal-AsnProLysGluSerIleLeuLysArg----- 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HILLE HELLE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   450 VallysAspileGlyTyrile----PhelysGlulys---PheAlstysAlsValGly 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           900 STANGGANTATAGGANTAACCIGCITTIAAAGAAAAATICIGGCIAAAAGCCIGGGG 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: eqapbs ramail.nih.gov
lissue Procurement: AFGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MQ222227.1 01:20403627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BU222227
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HEFERENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTTENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWEEDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                              <u>-</u>
                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                            â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>=</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
```

found through the L.M.A.G.E. Consortium/LLNL at:

Plate: LLAM13279 row: i column: 20

http://image.llnl.gov

High quality sequence stop: 606.

Location/Qualitiers

FEATURES

```
/Lissac_type "embryonal carcinoma, cell line"
/lab host-"bildb (phage-resistant)"
/note-"organ: testis: vertor: pow-spowfts; Site_1: Not1;
Site_2: Sali, Cloned unidirectionally; oligo df primed.
Average insert size 2.5 kb. Library enriched for full-fength clones and constructed by Life Technologies.
Note: this is a NHH.MGC Library."
a 148 c 152 q 259 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ث
د
د
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      133 LysGlyGluValLeuGlnMet.GluAspAspLeuValIleSerFheGluLeuMetLeuCys 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              173 AlaVallleProlleAsnGlySerProArqThrProArqArqGlyGlnAsnArqSerAla 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         193 ArallealaLysGlaLee3JuAsaAsfThtAreHet3AvAlLee37.07.034uHis 212 Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille Hille 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    316 CGGATAGCAAAAACAACTAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAAAT 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u></u>
근
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          376 GAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATTTTATACCTTTTATAGAT 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7+7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       576 ATCCAACATITAATGATITITAAATCCAGCAAGTGAACAACGCITCAAAAAATCTGAT 735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             113 SorThrSluileAsnSerAlaLeuValLeuLysValSerTrpileThrPheteuLeuAla 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                136 AAAGGGAAGTATTACAAATGGAAGATGATCTGGTGATTTCATTTCAGTTAATGT 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   196 GPCCFTGACTATTTATTAAACTCTCCCCCCATGTTGCTCAAAGAACAATATAAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  213 ChucysAsniicAspCluValiyasAssValiyrihetysAsnihetictholianiitasn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                616 CITIGATICAAGAGGTIGAATIGTAATTECTECAGAGACTICCAGTIAGGACTIGTTATGAACAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        153 ValicuAspTyrPheilelysLeuSerProProMetLeuLeuLgsGluProTyrLysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  233 SerLeuGlyLeuValThrSerAsnGlyLeuProGluValGluAsnLeuSerLysArgTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    253 GluGlufleTyrLeuLysAcnLysAshLeuAspAlaArqLeuFheLeuAcpHisAcpLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           273 ThricouGinThrAspSerileAspSerPheGinThrCinArqthrProArqtysSerAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         293 LeuAspGluGluValAsnValIleProProHisThrProValArqThrValMetAshThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProbyscluserHeteu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  880
230
6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
/organism-"Homo sapieus"
                                                                                                          /clone_lib-"NIH_MGG_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-026-459A-43 (1-859) x BC222227 (1-880)
                                                                   /clone-"IMAGE:6041563"
                                   /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  332 e SerTyrPheAsnAsnCysThrValAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9.220-101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1114.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             92,198
89,848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25.038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                           321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>⊋</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ĝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            윤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
```

```
1 (bases 1 to 914)
Marta,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,P. and
Waterston,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ES: 27-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             polylinker; 1st strand oDNA was proposed from mammary gland tissue from a lactating female, and was then primed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Eutheria, Rodentia, Sciuroquathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IMAGE Consortium (info@image linl gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note-"Vertor: pT7T3P Par (Pharmaria) with a modified
                                                                                                                                                                                                                      764 ValScrilcGlyGluSerFheGlyThrSerGluLysPheGlnLysIleAsnGlnMctVal 783
                                                                                                                                                                                                                                                                                                                                               784 CysasnSeraspargValLeuL;sargSeralaCluClySerasnProFroLysProlleu 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              824 GlyGluSerLysPheGlnGlnLysLeuAlaGluMetThrSerThrArgThrArgMetGln 843
                                                                                            744 TyrLysIleSerGluGlyLeuProThrProThrLysMetThrProArgSerArgIleLeu 763
                                                                                                                                                       302 TATAAAATTTCAGAAGGTCTGCCAACAACAAAAATGACTCCAAGATCTAAGAGTTTA 361
                                                                                                                                                                                                                                                   804 LysLysLeuArgPheAsplieGluGlySerAspGluAlaAspGlySerLysHisLeuPro 823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       242 GGTAGTTGAGGGTTAGGGATTGCTGGAGGGAAGATGTATATTTGAGGGGTGAAGAGTGCA 301
                                                                                                                                                                                                                                                                                                                                                                                                       4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          free through LLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clonc_lib-"Soarcs_mammary_gland_NMLMG"
/sex="female (lactating)"
/lissuc_lype="mammary gland"
/lab_bost-"DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1996)

Contact: Marra M/Mouse EST Project
WashD-HHM Mouse EST Project
WashIngton University School of Medicinep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Seg primer: -28ml3 rev2 ET from Amersham
High quality sequence stop: 422.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Mus musculus"
/db_xref="taxon-10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein (MOUSE);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This close is available regalfy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone="IMAGE:1247598"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA763411
AA763411.1 GI:2813158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MGI: 661286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sonre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA763411/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                               ŏ
                                                                                                                                                       q
                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                     BM450931
ACRRCOUKT_6393544 NIH_MCC_72 Homo sapiens chuna innaGR:5528037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /cione_lib "Meldactic melanoma"
/tissuc_lype "Meldactic melanoma"
/lab_host="nil08 (phage-resistant)"
/lab_host="nil08 (phage-resistant)"
/lab_host="nil08 (phage-resistant)"
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 (phage-resistant)
/lab_host="nil08 
                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata; Euteleostomi,
Mammalia, Eutheria, Frimates, Catarrhini; Hominidae; Homo.
1 (bases 1 to 1023)
NIH-MGC http://mgc.nci.nih.gov/.
National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA Sequencing by: Agencourt Bloscience Colporation
Clone distribution: MG clone distribution information can be
found through the I.M.A.G.E. Consortium/LIND at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                684 IleValPheTyrAsnSerValPheMetGlnArgLeuLysThrAsnIleLeuGlnTyrAla 703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                554 HisAlaValGInGluThrPheLySArgValLeuIleLySGluGluGluTyrAspSerIle 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        704 SerThrArqProProThrLeuSerProlleProHisIleProArgSerProTyrLysPhe 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24 ProSerSerProLeaArglleProClyClyAsnileTyrIleSerProLeuLysSerPro 743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1023
216
0
349 rgValLysAspileClyTyrilePhe-----LysCluLysPhe 361
                                                           796 GEGRAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAATTT 839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Flate, LLAM12204 tow. d column, 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-r@mail.uih.gov
Tissue Procurement: ATCC/DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-026-459A-44 (1-859) x BM450031 (1-1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High quality sequence stop: 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /cione="!MAGE:5528037"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon-จัดถักดี"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 formations/@malifiers
                                                                                                                                                                                                                                                                                                           BM450031.1 GI:18499071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.57e 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1111.00
100 00*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24.95%
                                                                                                                                                                                                                                   5', mRNA sequence, BM450031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Southors
                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.:
                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                         RESULT 8
                                                                                                                                                          BM450031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RIGIN
                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                        SOCOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
```

547 LysGlySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAla 566

with a Not I - oligo(dT) primer. Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not and cloud into the Not I and Eco RI sites of the modified pl713 vector. Library is normalized. Library was constructed by Hente Soares and M. Patima Honaldo."

306 367 CledlyCysValCluffcClySerClnArgTyrLysLcuClyValArgLcuTyrTyrArg 386 HILLIIII HILLI HILLIII HILLIIII 887 ValMetGluSerMetLeuLysSerGluGluGluArgLeuSerIleGlnAsnPheSerLys 406 427 AlaThrTyrSerArgSerThrSerGInAsnLeuAspSerGlyThrAspLeuSerPhePro 446 447 Trp11eLeuAsnValLeuAsnLeuLysAlaPheAspPheTyrLysValIleGluSerPhe 466 467 | Helysaladludlyasnlenthrarqdlumot HelyshislendluarqCysGluHis 486 | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE | HELLE 487 ArgileMetGluSericauAlairpLeuSerAspSerProLeuPheAspLeuileLysGlm 506 507 SerLysAspArgGluGlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuPro 526 527 LeuGlinAsnAsnHisThrAlaAlaAspMetTyrLeuSerProValArgSerProLysLys 546 267 PheleuAspHisAspLysThrLeuGlnThrAspSerIleAspSerFheGluThrGlnArq 286 914 TEFFERGATICAGAALAAAGGELGGAGGTGT - FEGFITFFAGGGGFFFFFTAAAGGGGGAG 857 307 ArgThrValMetAsuThrileGlnGlnLeuMetMetIleLeuAsnSerAlaSerAspGln 326 797 FOGGGTGTTTTGGAACCTATGCAACAATTTATTGTGATTTTTAAACTGGGGAATGAGGG 738 347 tentysArgVa tt_T SAsp t_1 e $O(TTT^{\pm 1})$ ePhetTSC1u t_T SP\eA (at_T) SA (at_T) 678 CTAAAGCOGGT - AAGGACGTTGGGCACATCCTTAAAGAGAAGTTTCTA - - - ACGCTGTGG 623 622 OCAUGOTOTOTOAFFORGAGTAÇAAFATATAAAFTIFTIÇAGTIFÇATIÇITATITIĞĞ 562 GTGATGGAATGCATGCTTAGATGAAGAAGAAGAAGGTTTGTCCATTCAGAATTTTAGCAAA 503 407 LeutenAsnAspAsnilePheHisMetSerLeuteuAlaCysAlaLeuGluVaiValMet 426 422 ATCAAAGTGGAAGCCAACTTGACAAGAGAAATGATAAAACATTTAGAAAGATGTGAGCAT 263 262 CGAATCATGGAATGCCTTGCATGGCTTTCAGATTCACCTTTTATTTGATCTCATTAAGCAG 203 FCCAAGGATGGAGAAGGACCT - - GATAACCTTGAACCTGCTTGTCCTCTCTCAGCCTGCCTT 146 427 ProSerGluAsnLeuIleSerTyrPheAsnAsnCysThrValAsnProLysGluSerIle 287 ThrProArgLysSerAsnLeuAspGluGluValAsnValIleProProHisThrProVal Conservative: Mismatches: Indels: Matches: Length: Gaps: US 09 026 459A-43 (1-859) x AA763411 (1-914) 6.160-95 1056.50 82.148 75.978 23.738 Best Local Similarity: Percent Similarity: Aliqument Scores: Query Match: HASE COUNT ŝ RIGIN 2007

3

5 = ŝ 3

5 = 3 ŝ

ŝ ò S <u>2</u>

5

ŝ

9 5 £ ŝ

5 <u>2</u> ŝ ŝ ŝ

3

```
was primed with a Nofl-Oligo(dT) primer. Five prime end enriched, double-stranded cDNA was digested with Not I and cloned into the Not I and Feo FV siles of the pCMVSPORT 6 vector. Library was normalized. Library was constructed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST 16 FEB 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /hote="Organ: brain; Vector: pCMVSPORT 6; 1st strand cDNA
                                                                                                                                                                                                                                                                                                            Eukaryota, Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                    AL563757 LTI_NFL001_NBC4 Homo Sapiens cDNA clone CS0DD007YA05 4 AL563757 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         171 LysThrAlaValileProlleAsnGlySerProArqThrProArqGlyGluAsnArq 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           791 AAAACAGCTKTTATACCCA FFAATGGTTGACCTGGAACAGGCAAGGGAAGTFAAAAAGG 732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                191 SerAlaArgIleAlaLysGlnLeuGluAsnAspThrArgIleIleGluValLeuCysLys 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 211 GludisGluCysAsnilcAspCluVallysAsnValTyribetysAsnphetletrothe 230 [HIIIIIIIIII]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genoscope - Centre National de Sequencade
HP 191 91006 EVRY cedex - France
Email: segref@genoscope.cns.fr, Web : www.genoscope.cns.fr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           792
217
7
38
                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 792)
Li,W.H., Gruber,C., Jessec,J. and Polayes,D.
Fell:length cbWA libraries and normalization
Unpublished (2901)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue_type="neuroblastoma_cells"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /elone_itb="LTI_NFL001_NBC4"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Longth:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-026-459A-43 (1-859) x AL563757 (1-792)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone-"CS0DD007YA05"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualitiers
                                                   567 PheGlnThrGlnLysProLeuLys 574
                                                                                    25 TICCATACTCAGAAGCCATIGAAA 2
                                                                                                                                                                                                                                     AL563757.1 G1:12913464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1,12c-93
1043,00
84,53%
81,89%
                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23,428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  792
                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                             human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aliqnment Scores:
                                                                                                                                                                                                                                                        EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                          AL563757/c
                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                      ALLITHORS
                                                                                                                                                                                                                                                                                                                                                                                                    TOURNAL
                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                               LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Чd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ω
```

```
This is the 5' sequence of the clone insert.

Clone from a Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKT2); Email s welmannädkiz heidelberg.de;
sequenced by BMFZ (Biomedical Research Center at the Charite,
Berliu/Germany) within the CDNA sequencing consortium of the German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AL599633
DKF7p713P042_r1 313 (synonym: hlcc2) Homo sapiens cDNA clone
DKF7p313P092 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
Eukaryota Mertazoa: Chordata: Craniata; Vertebrata; Euteleostomi;
Mammalia: Futheria: Primates: Catarriiti; Homisidae: Homo.
27] AsplysthricudtathraspscriteAspscribedlathrdiaArgthricarguys 290
                                                                                                                                                                                                                                                                                                                                                                                                                                        (1) Agaibriles/IndialogMetMet/ListenAga/SetAlaSetAspGinProSetGliAso 330
(2) Agaibriles/IndialogMetMet/Listen/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/IndialogMet/Agaibriles/Indialo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1) LeulleSerTyrPheAsnAsnCysThrValAsnProLysGluSer11eLeulysArgVal 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       371 GiuileGlySerSinArgTyrLysLeuGly--ValArgLeuTyrTyrArgValMetGluS 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ESI (Kochrer, K., Beyer, A., Mewes, H.W., Weil, H. and Wiemann, S.)
Unpublished (1999)
                                                                                         611 AFGAAFTOTFOTFOGACTIFICTMACATCTWATGGACTFOGAGGTFGAAATFOTFAAA 552
                                                                                                                                                                                                                                                                                            551 OGATACGAAGAATTTTCTTAAAAATAAAGAFCTAGATGCAAGATTATTTTGGWTGT, 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               291 SerAsnLeuAspGluGluValAsnValIleProProHisThrProValArqThrValMet 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 411 YIGTITTCYTWITTTTACGACTGCACAGGGAATCCAAAAGAAAGTATACTGAAAAGAGTG 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (5) LysAspileClyTyrIlePhcLysCluLysPhcAlaLysAlaValGlyGluGlyCysVal 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            191. GAAATTGGATGAGGAATAGAAAGTTGGTTGTTTGGGTTGTATTAGGGAGTAATGAAAT 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           198 erMetLenLysSerGluGluGluArgLeuSerlleGlnAsnPheSerlysLeuLeuAsn- 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               410 AspAsnIlePheHisMetSerLeuLeuAlaCysAlaLeuGluValValMetAlaThrTyr 429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       471 GACAYIWICCAACAAITAAIGAIGIITIITAAAITCAGGAAGIGITGAACHHGAGAAAIT 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Royer, A , Mewes, W , Weil, B and Wiemann, S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Am Klopferspitz 18a D-82152 Martinsried, Germany
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ALS99633.1 G1:15162921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 605)
Kochter, K., Reyer, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Koehrer K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        440 SerArdSer 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11 GCAGIAAGI 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AL599643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MIPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOHENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A1.599633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Summeral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SAIRCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>=</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ē
                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
```

Flease contact the RZPE. Ressourcenzentrum, Heubnerwey 6, 14059 Berlin-Charlottenburg, GFFMANY, Email: clonestrpd de

No st seguénce available. This clone (DKF7p317P992) is available at the ETPS in Rellin

Genome Project.

```
BE082846 EST 12-JUN-2000 PF2-RT0412 210260 011 206 RT0412 Hous Saffers THAN FRAS Sequence.
                                                                                                                                                    /nste-"Vector. pTriplEx2; Site_1: SfilA; Site_2: SfilB: cDNA-collection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ValazgThrValmetAsnThrIleGlnGlnLeuMetMet.IleLeuAsnSerAlaSerAsp 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             386 ArgValMetGluSerMetLeuLysSerGluGluGluArqLeuSerIleGluAsnPheSer 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        266 LeuPheLeuAspHisAspLysThrLeuGlnIhrAspSerIleAspSerPheGluThrGln 285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                286 ArgThrProArglysSerAsnLeuAspGluGluValAsnValIleProProHisThrPro 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 AGAACACCAGAAAAAGIAACCIIGAIGAAGAGGIGAAIGIAATICCICCACACACIGCA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301 GTTAGGACTGTTATGAACACTATCCAACAATTAATGATGATTTTAAATTCAGGAAGTGAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    326 GlnProSerGluAsnLeuIleSerTyrPheAsnAsnCysThrValAsnProLysGluSer 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       351 GARROTTCARAAAADGTGATTTCGTATTTAACAACHGCAGTGAATCCAAAAGAAGT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421 ATACTGAAAAQAGTGAAGGATATAGATACATCTTTAAAGAAATTTGCTAAAGCTGTG 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         366 ClysinslycysValsiuleslySersiaArqtyrLysLeuslyValArqLeutyrtyr 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541 CGAGTAATGAAATCCATGCTTAAATGAGAAGAAGAACGAITATGCAITGAAAATTTTGGC 600
                                                                                                                                                                                                                                                                                                                                                                                                                                         206 GluValLeuCysLysGluHisGluCysAsnIleAspGluValLysAsnValTyrPhcLys 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           246 GluAsnLeuSerLysArgTyrGluGluIleTyrLeuLysAsnLysAspLeuAcpAlaArg 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GAAGTTCTCTCTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 TIAITIITGGAICATGATAAAACTGTTGAGACTGATGTATATAGACAGTTTTGAAAACACAG
                                                                                                                                                                                                                                                                  605
201
0
0
0
                                                                        /close="DKFCp313F092"
/close=lib=-313 (synonym: hlcc2)"
/dev_staqe="adult"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                      Conservative:
Mismatches:
Indels:
                                                                                                                                                                                        106 g 179 t
                                                                                                                                                                                                                                                                                      Matches:
                                                                                                                                                                                                                                                                    Longth.
                                    /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                   US-09-026-459A-43 (1-859) x AL599633 (1-605)
                                                      /db_xref="taxon:9606"
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BE082846
BE082846 1 GI:8473151
                                                                                                                                                                                                                                                                  3 Ole-93
                                                                                                                                                                                                                                                                                  1037.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                         $60°80
                                                                                                                                                                                            9
                    .605
                                                                                                                                                                                                                                                                                                                           Best Loral Similarity.
Query Match:
                                                                                                                                                                                        E 877
                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             406 Lys 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601 AAA 603
                                                                                                                                                                                                                                                Aliqnment Scores:
                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NOTHINITANI
                                                                                                                                                                                          MASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BH082846/C
                                                                                                                                                                                                                                                                      Ç
Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PFSTIT 12
PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , oy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             d
                                                                                                                                                                                                                                                                                                                                                                                                                                           ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             òζ
```

```
/hote-forgan: breast; Vector: puelB; Site_1: Smal; Site_2: Smal; A min!-library was made by clouing products derived from oveSTES FOR (U.S. Letters Patent application No. 196 716 - Lodwig Institute for Canner Research) profiles into the pu? He vector. Reverse transcription of tissue minAA and cDAA amplification were performed under low all 129 c = 127 q = 226 t. I others
                                                                                                                                                                          Nagai,M.A., da Silva,W. Ji., Zago,M.A., Bordin,S., Costa,F.F.,
coldman G. H. carvolho,A.F., Matewima,A., Faia,G. S. Simpson,D.H.,
Brunstein,A., deoliveira,P.S., Burber,P., Jongeneel,C.V., O'Hare,M.J., Soares,F., Brentani,R.K., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This sequence was derived from the FAPESP/LICR Human Cancer Genome ratoject. This ontry can be seen in the following UKL (http://www.lowing.org.br/ssripts/qethtml2.plcil.kt2-RC2 BT0642 210 200.014.e06Ai +.2000-02-21844-1)
                                                Homo sapiens
Enkaryota: Metazoa: Chordata: Craniata: Vertebrata: Enteleostomi:
                                                                                                                         l (bases 1 to 694)
Dias Neto,E., Gateia Correa,E., Verjovski-Almeida,S., Briones,M.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509–010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                      Shotqun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             676 CACTGCACACTGAT - CCAAAAGAAGTATACTIGAGAAGAGTGAAGGATATAGATAGATG 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 377 TyrtysLeuGlyValArgLeufyrTyrArgValMetGluSerMetLeuLysSerGluGlu 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       397 GluArqLeuSerIleGlnAsnPheSerLysLeuLeuAsnAspAsnIlePheHisMet.Ser 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3.7 ASHCYSThrValAShProLySGluSerIleLeuLySArqValLySASpIleGlyTyrIle 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                617 TTTAAAGAGAAATTTGCTAGAGGTGTGGGGAGATTGTGTGGAGAATTGGATCACAGGGA 558
                                                                                                 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                      Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US 09 026-459A-43 (1-859) x BE082846 (1-694)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              High quality sequence start: 58
High quality sequence stop: 669.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:9606"
/clone_lib="B10642"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: asimpson *Indwig.org.br
                                                                                                                                                                                                                                                                                                                                                                                                                                       Laboratory of Cameer Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seq primer: puc 18 torward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /dev_stage-"Adult'
                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1,840-92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tel: +55 11 2704922
Fax: +55 11 2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96.33%
94.95%
23.13%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6.44
                                                                                                                                                                                                                                                                                                                                 sequence tags
                                                                                                                                                                                                                                                                                      Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                    1970707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Brazil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   All-inment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a.) Inos
                                                PERMISH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RASE COUNT
                                                                                                                            REFERENCE
                                                                                                                                                    AUTHORS
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                         THIRNAL.
                                                                                                                                                                                                                                                                                                                                                                                    MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES.
                                                                                                                                                                                                                                                                                                         111E
                                                                                                                                                                                                                                                                                                                                                                                                          MM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>.</u>
```

```
Melfon, D., Meadows, A., Clifton, S., Hillier, L., Marra, M., Pape, D., Wylie, T., Marfin, J., Blistain, A., Schmitt, A., Theishou, R., Ritter, E., Ronko, I., Bennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsaqareishvili, R., Williams, T., Jackson, Y., and Nowers, Y., WashU-Harvard Pancreas EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Libraries were constructed by Dr. Douglas Melton
DNA sequencing by: Washington University Genome Sequencing Center
For information on obtaining a clone please contact: Unliana Brown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Endocrine Pañoreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryola, Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia: Eutheria; Primates; Catarthini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This sequence now available from the IMAGE consortium, for clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            iallh09.yl Human Pancreatic Islets Homo sapiens chwa clone
IMAGE:5638049 5' similar to qh:MI5400 KETINOBLASTOMA-ASSOCIATED
PROTEIN (HUMAN): qb:M26391 Mouse retinoblastoma susceptibility
                                                                                                                                                                                                                                                                                                                                                                                     317 TTTGATTTTTACAAAGTGATGGAAAGTTTTATCAAAAGCAGAAAGTTGACAAAGAA 258
                                                                                                                                                                                                                                                                                                                                       257 ATGATAAAACAHIIAGAAGGALGIGAACALGIGAALGAALGAATGCCHIGCATGGCTCTCA 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       517 LeuGluSerAlaCysProLeuAsnLeu-ProLeuGlnAsnAsnHisThrAlaAlaAspMe 536
                                                                                              437 LeuAspSerGlyThrAspLeuSerPheProTrp1leLeuAsuValLeuAsuLauLysAla 456
                                                                                                                                                                                             457 PheAspPheTyrLysVall1eGluSerPheIleLysAlusluGlyAspLeuThrArach 476
                                                                                                                                                                                                                                                                                         477 MetiletysHisLeuGluArqCysGluHisArqHeMetGluSerLeuAlaHplauSer 496
417 LeuteuAlaCysAlateuGluValValMetAlaThifyrSerArgSerThrSerGluAsn 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Douglas Melton, Kiaus H. Kaestner, & Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                   536 tTyrLeuSerProValArqSerProLysLysCysGlySerThrThrArqVal 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone_lib-"Human Pancreatic Islets"
/tissue_type-"Islets of Langerhans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          m KNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     intogimage.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fax: 617-495-8557
Email: dmelton@biohp.harvard.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Seq primer: 40RP from Gibco
High quality sequence stop: 430.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     623 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein (MOUSE);, mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone-"IMAGE: 5638049"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xre1-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (brown@fas.harvard.edu)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AW583181
AW583181,1 G1:7260125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 623)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rel: 617-495-1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          orders contact:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MA 02138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NOLL INTERIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOTTRIVAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
                                              a
                                                                                                                                            £
                                                                                                                                                                                             Ġ
                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                        ô
                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ô
```

/dev_stage="Adult"

```
â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    흪
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear EST 27-JAN-1998
             /hote="0rgan, Fancteds, Vector, pSrökil, Site_l: Not i, Site_2: Sal 1; Library constructed using Superscript Plasmid Library kit. (Lite Technologies). cDNA made by oligo-dr priming. Size-selected by column fractionation; average nacrt size 1.08 kb. Primary library.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MANORAD INCOMEST SET 27-JAN-1 VSAGARD TO SET 27-JAN-1 VSAGARD TO SET 27-JAN-1 VSAGARD TO SET 27-JAN-1 VSAGARD TO SET 27-JAN-1 MANGE 124766 F SIMILATION OF MISTORIAN ANSOCIATED PROTFIN (HUMAN); qb-MZ6491 Mouse relinchlastoma susceeptibility protein (MOUSE);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  34) nPr.cys31aSeritefortysArgValtysAspTleStyTyTlePhetysCletysSt 3e1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 351 eAlaLysAlaValGlyGlnGlyCysValGluIleGlySerGlnArgTyrLysLeuGlyVa 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241 ytemProGluValGluAsnLeuSerLysArgTyrGluGluIleTyrLeuLysAsnLysAs 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        261 pLeuAspAlaArgLeuPheLeuAspHisAspLysThrLeuGlnThrAspSerIleAspSe 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               281 rPheCleThrClnArgThrProArgLysSerAsnLeuAspCluCluValAsnValllePr 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      401 oProHisThrProValArgThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAs 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421 nSerAlaSerAspGlnProSerGluAsnLeuIleSerTyrPheAsnAsnCysThrValAs 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       423 TOCAAAAAAAAATATACTGAAAAGAGGGATATAGGATACATCTUTAAAGAGAATT 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              483 IGCTAAAGCTGTGGGACAGGGTTGTGTCTCGAAATTTGATCACAGGGATACAAACTTGGAGT 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       543 TGGCTTGTATTACOGAGTAGGAADOCATGCTAAADOGAGAGAAGAAGATTATGCAT 602
                                                                                                                                                                                                                                                                                                                                                                                    3 ACAAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATATAGAATATAGAAAAAAA 62
                                                                                                                                                                                                                                                                                                                                                                 202 ThrArallelledlyWalleuCystysCludiscleTysAsulleAspoluValLysAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                          222 ValTyrPhelysAsnPhelleProPheMetAsn·SerLeuGlyLeuValThrSerAsnGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 others
                                                                                                                                                                                                     623
2201
2
1
                                                                                                                                                                                                                                  Conservative.
                                                                                                                                                                                                                                                         Mismatches·
                                                                                                                          109 g 186 t
                                                                                                                                                                                                                     Matches:
                                                                                                                                                                                                     Length:
                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                  US-09-026-459A-43 (1-859) x AW583181 (1-623)
                                                                                                                                                                                                                                                                                                                                                                                                                                                               /lab_host-"DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AA763485.1 CI:2813232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         401 eClnAsnPheSerLysLeu 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            503 ICAAAATTITAGCAAACTT 621
                                                                                                                                                                                                                   1016.00
98.07%
                                                                                                                                                                                                     3.95e - 91
                                                                                                                          93 c
                                                                                                                                                                                                                                                         97 108
                                                                                                                                                                                                                                                                         22.828
                                                                                                                                                                                                                                                       Best Local Similarity.
                                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                  Aliqument Scores:
                                                                                                                                                                                                                                                                       Query Match.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                     Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA764485/0
                                                                                                                            BASE CHINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                              RIGIN
                                                                                                                                                                                                                         Score
                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                     90
                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
```

```
Jobes 19730-Fac (Pharmacia) with a modified polylinker; 1st strand cDNA was prepared from mammary gland tissue from a lactating female, and was then primed with a Not I - oligo(dT) primer. Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library is normalized. Library was constructed by Bento Soares and M. Falima Bonaido. " 172 c 204 g 251 t 2 others
                                                                                                                                                             Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Gelsel,S., Kuraba,T., Lacy,M., Lo,M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B., Theising,B., Wylle,T., Lennon,G., Soares,B., Wilson,R. and Waterston,P
                                                       Mus musculus
Eukaryota; Metazoa; Chordata; Craniata, Vertebrata, Euteleöstömi;
Mammalia, Eutheria; Rödentia, Sciurognáthi, Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This close is available regally-free through LINE, contact the IMAGE Consortium (info@image lln1 gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      684 POYTASSASSTITAAASSTISTCTSOOONOOTTTAAAASASASTOOTTAAAASASSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 326 InProSerGluAsnLeuIleSerTyrPheAsnAsnCysThrValAsnProLysGluSerI 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         744 GOGGAHOGGAAAAANTHGFFOOTGGATATTGTGGATATTGTGGGTTAGGTGGAAAGAAGAFG 685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            * 366 [yG)sG]yGysVə1G!v1LoG]ySorC!nArgfyr!ys!ovG]yVə'ary'coffyrlyrA 386
||||||||||||||||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           306 alArgThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAspG 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                803 TTGG-GCCGTTTTTGATACTACTCCACCATTAGGGGGGTTTTTAATTTCCCCAAGTATCA 745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                346 leLeuLysargVaiLysAsFileGlyTyrilePheLysCluLysPheAlaLysAlaValG 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            287 Thr ProArgiys Ser Asn TecaAspation LuVal AscaVal I LeProProHisthr Prov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Louis, MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Mus musculus"
/db_xref="taxor,10090"
/clone="INAGE:1247665"
/clone=lib="Soarcs_mammary_gland_NMI_MG"
/sex="female (lactating)"
/tissue_type="mammary gland"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               216
17
53
5
                                                                                                                                                                                                                                                                                                                                                              Contact, Maria M/Mouse ESI Project
Washi HHM Mouse EST Project
Washington Intersity School of Medicinep
4444 Forest Park Parkway, Box 8501, St. Ed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seq primer: -28m13 rev2 ET from Amersham
High quality sequence stop: 495.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative.
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                         The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-026-459A-43 (1-859) x AA763485 (1-871)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          [146-4t]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1013 00
80 348
                                                                                                                                         l (bases 1 to 871)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74.48%
22.75%
9
                                                                                                                                                                                                                                                                                                                                         Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .871
                                house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MGI:661353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
                                                       ORGANISM
                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                         JOURNAL,
                                                                                                                                                                   AUTHORS
KEYWORDS SUURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score.
```

Tue Jan 21 10:04:04 2003

```
Homo sapiens
Eukaryota: Metazoa: Chordata: Craniata: Vertebrata; Buteleostomi;
Mammalia; Eutheria: Primates: Catarrhini; Hominidae; Homo.
                                                          504 CACTOSTAAATGACAACATGTTTCATATGTCTTNTACTGGCCTGTGCTCTTGAAGTTGTAA 445
                                                                                                                                                                                                                             486
                                                                                                                                                                                                                                                                                                                                                                                          486 isArqIleMetGluSerLenAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysG 506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLML at:
624 PYTPAGNOTIGIGIGIAGALFAGAGFACAGOGATATACAGTTGGAG FOCGATTGTAFTAGG 565
                                         486 rqValMetGluSerMetLenLysSerGluGluGluArqLeuSerTleGluAspPheSerL 406
                                                                                                                       406 ystrontonAspAspilePheHisMetSerfenGenAlaCysAlatenGluValValM 425
                                                                                                                                                                                                        426 etAlaThrTyrSerArgSerThrSerGlnAsnLeuAspSerGlyThrAspLeuSerPheP 446
                                                                                                                                                                                                                                                                                        446 roTrp11eLeuAsnValLeuAsnLeuLysAlaPheAspPheTyrLysValI1eGluSerP 466
                                                                                                                                                                                                                                                                                                                               484 GGTGGATTCTGAACGTACTTAALITAAAAGCCTTTGATTTTTACAAAGGTGATTGAAAGTT 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         506 InSertysAspArqcluGlyProThrAspHisLeuGluSerAluCysPruDeuLouAssLouP 526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          546 ystysgtysorthrthrArqValAsoserthrAlaAsnAlagtuthrGluAlathrSerA 566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87 AAAGAACT FCANTACAGTGTAAATTCTGCAAATACAGAGAGAGAGGCFFCAG 28
                                                                                                                                                                                                                                                                                                                                                                    466 hellelysAlaGluGlyAsnlewibrargGluMetilelysBisLeuGbuArgCysGluH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONA Library Arrayed by The L.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        conA Library Preparation: Life Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            http://image.llnl.gov
Plate: LLAM10293 row: 1 column: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Oupublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /ordanism·"Homo_sapiens"
/db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stop: 633.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 922)
NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                             Email: eqapbs-ramail.nih.gov
Fissue Procurement: ALCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           566 LaPhedInThrdInLysProLeuLys 574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27 COTTGOATACTCAAAGCCATTGAAA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BG253543.1 GI:12763359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mENA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HG25.354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   401108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOHN NAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PESSIEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KHYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               H:25 454 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S. HIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1,007015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ξ
                                                                                                                       5
                                                                                                                                                            ŝ
                                                                                                                                                                                                        5
                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                       ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \hat{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
```

```
/note-"Organ: liver; Vector: pGNV SPORT6; Site 1: Not1; Site_2: Sall; Cloned unidirectionally; oliqo di primed. Average insert size 1.7 kb. Library enriched for full-length clones and constructed by Lite Technologies. Note: this is a NHI-MRC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GCATTG-GACCAAATTATGATGTTGCATGTATGGCATATGCAAAGTGAAAGTATAGA 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      649 phoutysPhetystlettevalThrAlatyrtysAspheum oHisAlaVatGlmJuth 669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120 CCTTAAATTCAAAATCAT-GTAACAGCATACAAGATCTTCCTCATGCTGTTCAGGGGGGT 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  72.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        45.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                789 rPheGlyThr SerGlaLySPheGlaLySTivAsnGLuMetValCysAsnScrAspArQva 789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             477 ATTGGGGACTTCTGAGAAGTTCCAGAAAATAAATCAGATGGTATGTAACAACGACGACGTGT 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
C
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         596 TATTGANGGATCAGATGAAGCAGAAATGGAAGTAAAGATCCTCCCAGGAGAGTCCCAGTCT 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         656 CAGGCAGAAATTGGGAAATGACTTCTATTCGAAAAGGAAATGGGAAAGGGAAAGTGAAT 7.15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 AFCATCHGGACCHTTTGCAGCACCCTGCAGALGAGGTATGAACHCALGAGAGAG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         610 IlelleTrpThrLeuPheGlnHisThrLeuGluAsnGlu-TyrGluLeuMetArqAspAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #29 9HistoriaspilalemetMetCyssormerTyroly;1507,5155Vall, A olibera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      669 rPheLysArqValLeulleLysGluGluGluTyrAspserIleIleValPheTyrAsuse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  689 rValPheMetGluArqLeuLysThrAsuIleLeuGluTyrAlaSerThrAraProFroTh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         238 GSTCTTCATGOAGAAGAAAACAAATAT TTGAAGTATGCTTOACCAGGGCOCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              297 CTIGICACCAATACCICACATICCTCGAAGCCCTTACAAGTITCCTAGTTCACCTTACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           729 gileProGlyGlyAsmileTyrileSerProLeuLysSerProTyriys: LeterGludl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           749 yLeuProThrProThrLysMetThrProArqSerArqIleLeuValSerIleGlyGluSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ?89 lLeuLysArqSerAlaGluGlySerAsaProProLysProLeuLysLysLeuArqPheAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          829 GInGInLysteuAlaGluMetThrSerThrArgThrArgMetGInLysGluLysMetAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                             /cionc_lib="NHH_MGC_90"
/tissue_type="ademocarcinoma, cell line"
/lab_host="DHIOB (phage-resistant)"
                                                                                                                                                                                                                                                                                                    Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             849 AspSerMetAspThrSerAsnLysGluCys 859
                                                                                                                                                                                                                                                                                 Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         716 GGAAGCTGGGTACCTCCACACAGGAAAGAAAG 748
                                                                                                                                                                                                                                                          Length:
                                                                                                                                                                                                                                                                                                                                        indels:
                                                                                                                                                                                                                                                                                                                                                                                                   US-09-026-459A:43 (1 859) x BG253543 (1 922)
/clone="IMAGE:4472611"
                                                                                                                                                                                                                                                          1,11c-89
1004.00
                                                                                                                                                                                                                                                                                                90.51%
88.54%
22.55%
                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                                                              307
                                                                                                                                                                                                                                         Scores:
                                                                                                                                                                                                                                                                                                                                          Ouery Match:
                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                          Pred. No.:
                                                                                                                                                                                                                                         Alignment
                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         £
```

Search completed: January 19, 2003, 05:06:48 Job time: 1912.46 secs

Copyright (c) 1993 2003 Compugen Ltd.

oM nucleie - nucleie search, using sw model

Ruth ob:

January 16, 2003, 15;20:22; Search time 277).81 Seconds (without alignments) 18469.506 Million cell updates/sec

lutles Perfect scores

US US U26 459A 44 4161 | COCDICATOROPOCOPOCAAAAC.....AAATIGADGATTAFTIGATAGT 3161 Sections

DENTITY NIC Scoring table:

Gapop 10.0 , Gapext, 1.0

4230R132 Total number of hits satistying chosen parameters: 16154066 seqs, A047743476 residues Searched:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post processing: Minimum Match 10% Maximum Match 100% Listing Lirst 45 summaries

batabase :

qb_cst3:* qb_cst4:* qb_cst5:* em_est1um:* qb_qss:* om, est bar; em est bar; em est hum; em est in; em est ov; em_est ov; em_est ov; em_est pri; em_hte; e qb_est2:* qb_htc:* FS1:

em_qss_lam;
em_qss_mam;
em_qss_mu;
em_qss_mu;
em_qss_pro;
em_qss_pro;
em_qss_fod; em_gss_bum.* em_gss_inv:* em_gss_plu:* em gss_vrt:* 0-774566850-777777

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

CITMMADITEC

		Insectintion	000000000000000000000000000000000000000	BM450031 AGENCOÙRT	BM561083 AGENCOURT	BQ4 9221 AGENCOURT	BM545881 AGENCOURT	BO220275 ACENCOURT	AL597811 DKFZp3130
COMMINICO		â		1023 13 RM450031	ISM561083	BQ4 19221	BM545881	HQ220275	AL597811
		ĭ		_	÷	1.4		₹:	<i>-</i>
		Owery Match Length DR		1023	1051	1081	1122	 10 10	137
	×			28.8	8.87	77.1	æ. ~ ?4	5.7	6.77
		o to ass		910.2	\$ ' f, () f,	856	1:2.4	243.2	7.25.4
		K13411			7	~	4	u*	ş

BS610661 602611848	83570456 602591312	ALS6 4757 ALS6 4757	RM466194 AGENCOURT	BM453724 AGENCOURT	B1868359 603392330	BES 49.278 - 601.06.45.6.7	Butches 19 602644717	RM264009 iq33108.x	BE082846 RC2-BI064	AWS84181 iallh09.y	AL599644 DKFZp413P	B325 454 3 - 602 364 27 8	AL599105 DKFZp313G	AA76.8411 0w54a04.1	AW468244 CM4-HT018	AA763485 vw54h01.r	AW582967 lau8e08.y	ALF 92790 DKFZp3131	AULTO141 DKFZp762D	BE941246 MRO-HT015	AV715544 AV715544	BF144857 601790443	B1151568 602916108	AA258255 2159q04.1	BM475603 AGENCOURT		AW502887 UI - HF - BNO	BELFRO95 QV + BTO51				BULLEZZ AGENCOURT	BE9.44784 RC3-HT094	A1093215 qb04a02.x	ALS98766 DKFZp313F	BFR65749 601678141	A1082179 0X75e04.x	AW503514 01:HF BN0
BG610661	HG570456	AL563757	BM466194	BM453724	H1868359	HP549278	BG616219	BM264009	BE082846	AW583181	A1.599633	HG25 4543	AL599105	AA763411	AW368234	AA763485	AW582967	AL692790	At:120943	BE931236	AV715533	BF144857	B1151568	AA258255	BM475603	BG149050	AW502887	BE168095	В1821116	HM456728	B1526982	BQ22227	BE9 44784	A1093215	A1.598766	BE865749	A1082179	AW503514
2.5	- 1	ŗ,	<u>`</u>	13	~	5	=	13	10	10	J	<u></u>	5	\$	10	ىق	0	2	, r	<u></u>	10	_	~	ూ	-	1.2	10	10	<u>~</u>				12	5	σ	12	r	10
823		367	972	835	672	747	63	618	694	623	605	555	580	914	588	871	548	54.5	0.5 C4	263	594	734	736	525	1001	584	₹. •	484	569	2083	73.4	880	497	457	7.42	869	447	453
25.7	5 7	21.9	21.9	21.4	50.9	50.4	20.3	19.5	19.4	19.1	19.1	18.4	18.3	18.2	17.9	17.7	16.8	16.8	16.7	16.3	16.2	16.2	16.0	15.6	15.4	15.4	15.4	15.2	25.	15.1	15.0	14.8		14.5			14.1	14.1
9.669	2.760	692.2	691.8	678	660	~	5.0	617	614	605.2	605	596.4	580	575.2	566.4	558	530.2	530	ക വ ഗ	516.8	513.2	515	505.2	493.8	99	99	484.4	8	480.2	476.6	474.4	468	459.2	457	457	454.2	447	446
۲ ،	no	œ.	10	Ξ	<u></u>	<u>.</u>	.	1.5	14	17	8	5	20	5]	01 01	53	24	ur Ci	<u>ي</u> 1	C1	æ ?1	63	3.0	3]	25	<u>~</u>	7	₹ 2	9 !	1.	ဆ	5÷	0		42	4 3	44	45
		C						٥						U		٤				c								ر						c			Ð	

AL LONMENTS

BM45033 1 BM45033 1 LOCUS LOCUS ACCESSION ACCESSION KEYWORDS SOURCE ORCANISM TITLE JOURNAL COMMENT	BM450041 AGENCOREL 539344 NIH_MGG_72 Homo Sapirins CERA close IMAGE, 5528047 AGENCOREL 539344 NIH_MGG_72 Homo Sapirins CERA close IMAGE, 5528047 BM450031.1 GI:1849907] INH-MGG Michael Homore Coloredia: Futcleostomi; Mammalia: Euthoria; Primates: Catarrhini; Homoridae: Homo. Inthe Colored Coloredia: Futcleostomi; MGC) Confact: Mobert Strausberg, Ph.D. Enai: Gapbs remail.nih.gov Tissue Procurement: ATGL/DCTD/DTP CON Library Preparation: Lite Technologies, Inc. CON Colored C
FEATOTRES	nigh qualify sequence stop: 641.
Source	location/Qualifiers

```
/clone="IMAGE:Darmon,
/clone="lb="NHEMGC_72"
/Lisoue=Lipe="meianniche inclundad"
/lab_host="DH10B (phage=resistant)"
/lab_host="DH10B (phage=resistant)"
/note="Organ: Skin, Vector: pCMV-SPORT6; Site_1: Noti;
/site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
/site_2: Sall; Cloned unidirectionally.
                                                                                                                                                                                                                                                                                            'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 IICHAFFAGGGGGGTFAGGITGFGAGGAAIAGGTGGAGTTGGTGGAAGGGGTTAGAAGTT 240 🕆
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2459 TAACHLOCCAGGITCHGITTALGGCCACATTTAATATCTTCAGCTCTTTTTGGGGTAT 2528
7.21 TAACHLOCCAGGITCHGTHIHHHHHHHHHHHHHHHHHHHHHH
7.21 TAACHTOCCAGGITCHGTTAGGCCACATTTAATAATTTTAGGTCATTAT 780
                                                                                                                                                                                                                                                                                                                            1749 CAAACIGAAGAATATAGACCTTAAAATTCAAAATCATTGTAACAGGATACAAGGATCTTCC 1808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1929 ITCCACCACCOCCCTACCTTGTCACCAAAACCTCACATTGCTGGAAGCCCTTACAAGTT 1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2049 ATATAAAATTTCAGAAGGTCTGCCAACAACAAAAATGACTCCAAGATCTT 2108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.04 ARTALOAAFIGGEGAAFGAFFGGGGGGFFFFFGAGAAGFFFCAGAAAAFAAAAFGAGAFGGF 2168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2409 GGACOTT GGTGGADAPTGTGTGTAPAPPTFTGATTTCATTGTPTPTGTGAPTGTAAPTGTA 2468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2529 AAAATGTGCAGATGCAATTGTTT - GGGTGATTGCTAAGGCACTTGAAAATGTTAGTGATT 2586
                                                                                                                                                                                                                                                                                                                                                                                                         1809 TCAIGCIGIICAGGAGAGAGIICAAACGIGIIIIGAICAAAGAAGAGGGGGIAIIGAIICIAI 1868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1869 TATAG PATTGTATACTGCTCTTCATGCAGAGACTGAAAACAAATATTTGCAGTATGC 1928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2289 AGGAGAGTIGTAAATTIGAGGAGAAAQTGGGAGAATGACTTGTAGTGGAAAGGGAATGGA 2348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 ICATGCTGTTCACGGGGGGGTTCAAAOOTGTTTTTGATCAAAGAGGGGGGGGTATGATTTTTTTT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6; Gaps
                                                                                                                                                                                                                                                                                                                                                                   1.88 TOOTANTTOAPPOTTAABAATTOPFAAAAAAAAADIAIAIFTIAAOPPTAAAAAAPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2229 GAAAAAAÇÇETTIĞATATTGAAĞGATGAĞATĞAAĞGAÇGAĞATGGAAĞTAAAĞATĞTĞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 910.2; DB 13; Length 1023;
Prod. No. 1.1e 167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    43; Indels
                                                                                                                                                                                                                                                                        ie 167,
                                                                                                                                                                                            281 t
                                                                                                                                                                                                                                                                                      0; Mismatches
/organism "Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                        197 q
                                                                                                                                                                                                                                                   28.8%;
95.2%;
                                                                                                                                                                                                                                                                     tonal similarity 95 y
es 972, Conservative
                                                                                                                                                                                            3.14 a
                                                                                                                                                                                                                                                   Onery Match
                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                            BASE CHINI
                                                                                                                                                                                                               N I C I N
                                                                                                                                                                                                                                                                        Hessi
                                                                                                                                                                                                                                                                                                                                                                                                                                              Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>...</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>-</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>ت</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   춠
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
```

```
AGENCOMPT_6566133 NIH_M3C_67 Home sapiens cDNA clone IMAGE:5550905
5', mRNA sequence.
BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="Organ: eye; Vector: pGMV-SPORT6; Site=1: NotI:
Site=2. Sall, Gloricd unidirectionally. Filmet. Silgo dl.
Average insert size 1.75 kb. Library constructed by Life
Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukarycia, Metassa, Chordata, Ciuniata; Vertebrata, Euteleostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                    2587 GIPPATPIA PAGASATIGAAAATCI I GICIAAA I CO I GOCATPIAAAAACI TICIACOACA 2646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              947 TEGEATTACCCACTAATGCAATCCATGCTTAAATCAGAAGAAGAAGAACGATTA FCCALTCAA 1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1027 AATTTTAGOAACTTCTGAATGACATTTTTTCTGATGTTTTATTGCCTCTT 1086
                     901 TEGITTETT LEVELVE AGTAAAATGETGTGTGTT ATTGGATAGAAGAAALGGCCCCLA 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDNA Library Preparation. Life Technologies, Inc. CDNA Library Arrayed by: The L.M.A.G.. Consortium (LLNL.) DNA Sequencing by: Agencourt Bioscience Corporation flow distribution: MGC Clone distribution in MGC Clone distribution in through the L.M.A.G.E. Consortium/LLNL at: Plate: LLAM12263 row: m column: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              907 AAAGCIGIGGGAATAGGITGTGGAAAITGGAIGAGGATACAAACIIGGAGIICGC 966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 1051)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ATAGCTGTGGGACACACATTGGAAATTGGATGCACGGATACAAACTTGGAGTTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DR 13; Longth 1051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          inde:s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /lab_host-"DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28 8%; Scorp 909 4; DR 13
98.4%; Pred. No. 1.6e-167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue_type="retinoblastoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   299 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R hert S'rausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_lib-"NIH_MGC_67"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /elone-"IMAGE:5550905"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Impublished (1999)
Contact Ribert Strausberg, P
Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 High quality sequence stop: 7 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 197 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RM561083.1 GI:18806043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     221 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      938; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     330 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human.
                                                                                                                                                                                                                                              2763 A 2763
                                                                                                                                                                                                                                                                                      1021 A 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ouery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOTIRNAL
                                                                                                                                                                                                                                                                                                                                                                      BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                           51,50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
. ?y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   主
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       £,
                                      Ē
                                                                                                                                                                                                     ਨੰ
                                                                                                                                                                                                                                              Óγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ã
```

```
RQ4 99221
AGENCOURT_7766562 NIH, MGC_92 Homo sapiens cDNA clone IMAGE:6015480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721 GAGGACCCAGAATTAGAACATCATCTGGACCTTTTCCAGCACACCTGGAATGAG 780 、
                                        1087 GAGGITTGTAATGGGGACATATAGGAAAGTAGATGTCAGAATGTTGATATTGTGAAGAACAGAT 1146
                                                                                                                                                                                                 1207 AFCGAAAGTITIATCAAAGCAGAAGGCAACTTGACAAGAGAAATGATAAAAACAITTAGAA 1266
                                                                                                                                                                                                                                                                                                                                                                                                                                              1387 CITAATCITCCTCTCTCAGAATAATCACACTGCAGCAGATATGTATCTTCTCTCTGTAAGA 1446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1507 GCAACCTCCAGGCTTCCAGACCCATTGAAATCTACCTCTTTCACTGTTTTAT 1566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1567 AAAAAAGIGIATCGGGIAGCIATCICGGGIAAAIACACIIIGIGAACGTICIGIGI 1626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1627 GAGGACCAGAATTAGAACATATCATCIGGACCCIIITCCAGGAGGCGCIGCAGAAIGAG 1686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1687 TATGAAGTGAGAGAGAGAGATTTGGAGGAAATTATGATGTGTTGGATGTATGGCATA 1746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1747 TGCAAAGTGAAGAATATAGACCTTAA - ATTCAAAATCATTGTAACAGCATACAAGGATCT 1805
                                                                                                                     147 TOURTHOOPARGSALICIGAATGTGCTTAATTIAAAAGCCTTGATTITTAGAAGTG 1206
                                                                                                                                                                                                                                                                                  1267 CGATGTGAAGATGGAATGATGGAATGCTTGGATGGGTGTGAAATTGAGTTTATTTGAT 1326
                                                                                                                                                                                                                                                                                                                                                               1327 CELATTAAACAAHCAAAGGACGAGAAGGACCAACHGATCAGCTHGAAHCHGCHTGTGCH 1386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1447 TOTOCAAAGAAAAAAGGITCAACTAGGGGTGTAAAITGTACTGGAAATGGAGAGAGAGA 1506
                                                                              181 GAGGTTGTAATGGGCACATATAGCAGAAGTACATGTCAGAATCTTGATTGTGGAACAGAT 240
                                                                                                                                        421 CTTATTAAACAATCAAAGGACGAGAAGACCAACTGATCACCTTGAACTGGTTGTCCT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 AATH HAGGAAACH ECHGAA HGAGARAFITTEGA FA FGFGFFFFA FFGGGGT GGGCFFF 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIH MGC http://mqc.nci.nih.qov/. National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                       1806 FOOTCATGCTGTTCAGGAGACATTCAAACGTGT-TTTGATCAAAGAAGAGGAG 1857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           901 FOLDSAIGCEGNECAGGAGAATICAAACGEGEGTEGAGGAAGAGAAG 953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Perf (9221.1 | G1:21178297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 1081)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mkNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HQ4 59221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOTEST NOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KELEKEN.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOHNSON L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BQ4 19221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NHWHILL
                                                                                                                                                           ã
                                                                                                                                                                                                      5
                                                                                                                                                                                                                                          <u>-</u>2
                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                     \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ě
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ä
```

```
Contact: Robert Strausberg, Ph.D.
                                    Email: eqapbs-ramail.nih.gov
```

```
2263 GAAGCAGAIGGAAGTAAACATGIGGGAGAGAGAAAATITAAGGAGAAAATIGGAAAA 2322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2383 AACAAGGAAGAAATGAGGATGTGAGGACTTGGTGGACTGTGTGTACACCTGTGTGGATT 2442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2563 AAGCCACTTGAAATGTTAGTCATTGTTATTTTATACAAGATTGAAAATGTTGLGTAAATGC 2622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3643 TGGATAGTAAGAATGGCCCTAGAGTGGGAGTCCTGATAACCCAGGCCTGTCTCACTACTT 2742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2863 ITTSATTGACTGCCCATTCACCAAAATTATCCTGAAACTTCTTCTGCAAAAAATGTTTT 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2443 CATTGTCTCTCACAGATGTGACTGTATAACTTTCTCAGATTCTGTTTATGGCACATTTA 2502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2803 HTTTTTAATTTAACATGAACACCTTAGAAAATGIGIGTICTAATGIGTA COLAAATGIAAA 2862
Tissue Procurement: ALCC conditions. The Condition of the Condition of the Condition (LIANE) by The Library Arrayed by: The LiM. Consortium (LIANE) DNA Sequencing by Agencount Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 ATGACTITCTACTCGAACACGGAATGCAAAAGCAGAAAATGAATGATAGCATGGATACCTCA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GAAGCACATIGGAACTAAACATCTCCCAGGAGACTCCAAAATTTCAGCAGAAACTGGGAGAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301 AAGCCACTTGAAATGTTAGTCATTGTTATTATACAAGATTGAAAATGTTGTGAAAATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2623 TIGGCATHTYAAAAAGTIGTAGGAGTTIGTITIOOLOTGGAAAGTAAAALTGCTGTGOTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2503 ATATCTTCAGCTCTTTTGTGGATATAAAATGTGGGAGATGCAATTGTTTGGCTGATTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27.1%; Score 856; DR 14; Length 1081; 99.1%; Pred. No. 4.4e 157; Live 0; Mismatches 5; Indels 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         http://imagé.llnl.gov
Plate: LLAM13211 row: k column: 01
High quality sequence stop: 732.
                                                                                                                                                                                                              /orqanism-"Homo sapiens"
                                                                                                                                                                                                                               /db_xret-"taxon:9606"
                                                                                                                                                                            Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 99.1%
Matches 892; Conservative
                                                                                                                                                                                            .1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ouery Match
                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   οχ
```

2487

```
2248 ATTGAAGGAYGAGATGAAGGAGATGGAAGTAAAGATGYGGGAGAGAGYGGAAAYTTGAG 2307
                                                                                                                                                       2308 TAGAAAFTGGTAGAAGGASTTOTATTGGAAGAGGAALGGAAAAGGAAAAAAAAGAAATGAT 2367
                                                                                                                                                                                                                                          3488 TIATSGCCACATTAATATCITCASCICITITGCCAIAIAAAATGIGCAGAIGCAAII 2547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2548 STEEDSSTAATESTAAGSPASTISAAAESTEAGTGATESTAATTATAGAAGATIGAAA 2607
                                                                                         540 GTACACCTCTGGGAITCALLGTCTCTCACACATGTAAACTTTACAGTTCTGT 599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2428 otracammegartreatresmenteletestareneratarramagnitetet
                                                                                                                                                                                                                                                                                                                                                         2464 TATTTTACTATTCCAATCTCATATA 2988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10/8 TATTTACTATTGAAAAACGGAATA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BQ220275.1 GI:20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 881)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . nemnc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ċ
                                                                                                                                                                                                                                                                                    금
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         듣
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                             ã
                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                                                                                                                                                                                                                                                       1122 bp mPNA linear EST 20-FEM-2062
ADENCOURL_6505183 NIH_MGC_125 Homo sapiens cDNA clone IMAGE:5588245
57, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /hote-"Otgan: ovaly (pool of 3), Vector: pCMV-SFORT6, Stel." Ecoky (destroyed); Site_2. Not!; WAN SOURCE pool of three ovaries, from females ranging in age from 38 to 49 yo. Library is oliqo-dT primed and directionally cloned (Ecoky Site is destroyed uppn cloning). Average insort size 2.1 kb, insert size range 1-3.5 kb, library is normalized and enriched for full-length clones and was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           constructed by C Gruber (Invillenges). Persearch Genetics tracking code 046." asset to 2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Motarca, Chordata, Craniata: Vertebrata, Eutoleostomi;
Mammalia; Eutheria: Primates, Catarrhini; Hominidae, Homo.
                                                                                     2483 GAIAIACIGIGIGCETGTTTTAAAATTTAATTAAAIAAAAGGTGGAAGGAA 3042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2128 11CGGGAPTICTGAGAAGTTGGAGAAATAAATGAGATGGTATGTAAGAGGGACGGTGTG 2187
2024 TAGAAATTAGAAAAAAAATTACTAATTTACACATTAGATTTTATTTTACTATTGGAATCT 2982
                                                                                                                                                                            3443 AGTATAAGGATATGATAGTAGTAGTAGTGAAAGAGATTTGATAGGTGAGAATGTAAAA 3102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        +100 + GAACTTACTGATTATTTTCATCAACTIATGTTTTAAATGA-GGATTATTGATAGT 3161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cDNA Library Preparation: Life Technologies, Inc. chNA Library Arrayed by: The I.M.A.G.E. Consortiom (LLNL) NAS Sequencing by: Agencourt Bioscience Corporation (Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLML at:
                       720 GATATACIGIGICTECTITITATAAAATITITCTITIT-ATIAAAIAAAAGCIGGAAGCAA 778
                                                                                                                                                                                                                   779 AGTAFAAGGATATGATAGTATGATACTAGAAACAGATTTCATACCTCAGAATGFAAAA 838
                                                                                                                                                                                                                                                                                    NIBEMST http://mgc.nci.nih.gov/.
National Institutes of Bealth. Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          edeb lig
                                                                                                            Best Local Similarity 95.8%; Secre 752.4; DR 13; Length 1122;
Matches 827: Oppmerority
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Plate: LLAM12359 row: a column: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib-"NIH_MGC_125"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1999)
Contact: Robert Strausborg, Ph D
Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High quality sequence start. 48
High quality sequence stop: 773.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xre1-"taxon:9606"
/clone-"IMAGE:5588245"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tissue Pro≏uremen⁺ - Invitrogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             iogation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POST - FIRE DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BM545881.1 GI:18778365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 1122)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  460 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human.
                                                                                                                                                                                                                                                                                                                                                                                                                                         NOTHINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          URGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE CHINI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PEFFFFNCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                              BM545881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NICIA
N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                       2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                    Ś
```

```
881 bp mRNA linear ESF 02 MAY-2002
AMENORMENT 7572521 NIH_MOT_92 Home Sapiens cunA close IMAGE:6044522
BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukarymia, Moturoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                               959 TOTATOTICCAAAIGGAAILIGAILIGAGIGGGGGGGGGALIGAGG AAATIAIGGIGAAGIGGIG 1017
                                                                                                                                                                                                                                                                                                                                                                                                              2788 TAATITATA--TGTATAITITITAATITTAAGATGAA-CACOGTLASAAAAIGIGIGGIA 2844
                                                                                                                                                                                                                                                                                                            2845 TETATETIEEAATGCAAITISAITGACIGCCATICACCAAAATIAICCIGAACICIIC 2904
                        899 TAATTTATAATGGATATTTTTTTAATTTAAATGGGTTAGAAAAIGTGGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIH-MGC http://mgc noi nih qov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D.
```

```
/clone=InActE: 6044522*/
/clone=Inb="NHH_MGC_92"
/clone=Lib="NHH_MGC_92"
/clone=Lib="NHH_MGC_92"
/lissue_1ype="embryonal carcinoma, cell line"
/lissue_1ype="embryonal carcinoma; cell line"
/lab host="LibH0H (phage-resistant)"
/note="order testis: Vector: pNMV-SPORT6; Site_1: Not1:
Site_2: Sall: Cloned unidirectionally; oligo-dI primed,
Average insert size_2: % kb. Library enriched for
lull: Length clones and constructed by Life Technologies.
Note: this is a NH_MGC Library."
                                          ctNA Library Preparation: Lite Technologies, Inc.
c1NA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
LNA Sequencing by: Abancourt Bioscience Corporation
Clone distribution in MC clone distribution information can be
tound through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         317 TTALLOCAGGAGTTGAGGTGTTALACCCATTAATGGTTCACCTCGAACACCCCAGGC 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            677 GAAGACICACAAAAAAGTAACCITGATGAAGAGGTGAATGGTAATTGCTGCACACTGCAG 736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            797 AACCTECAGAAAATCTGATTTCCTATTTTAACAACTGCACAGAATCCAAAAAGTA 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               857 IACTGAAAAQQCTGAAGGATATAGGATACGTCTTTAAAGGAAATTTGCTAAAGCTGTGG 916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               917 GACAGGGTTGTGTGGAAATTGGATGAGGAAAAGAAAAGTTGGAGTTGGTTGTATAGC 976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     477 GAGGTCAGAACAGGGGGGGGGGGAAAACAACAACTAGAAAATGATACAAGAATTATTG 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   145 GAGGICAGAAQAGAGIGGAGGATAGGAAAAGAAGIAGAAATGATAGAAGAATTATTG 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   437 AAGTICICIGITAAAGAACAIGAAIGTAATATAGAIGAGGIGAAAAAIGITITAITIIGAAAA 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              497 ALTITATACCITITALGAALICICITIGGACTIGTAACATCTAATGGACTICCAGAGGTTG 556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           557 AAAATGTTTGTAAAGGATAGGAAATTTATGTTAAAAATAAAAGATGTAGATGCAAGAT 616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           617 TATITITGGATCATGATAAAAGTCITCAGACTGATTCTATAGACAGTTTTGAAACACAGA 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        885 TATEITIGGAICAIGATAAAACTCIICAGACIGAITCIAIAGACACHTIIGAAACACAGA 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7.37 TTAGGACTGTTATGAACACTATGCAACAATTAATGATGATGATTTAAATTCAGGAAGTGATC 796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.25 TACTGAAAAGAGTGAAGGATATAGATACATCTTTAAAGGAAAATTGCTAAAAGCTGTGG 684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23.5%; Score 743.2; DB 14; Length 881; 97.5%; Pred. No. 4.8e-145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18;
                                                                                                                                                                                          Plate: LLAM14287 row: e column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                              1. 881
/organism="Homo-sapiens"
/db.xref="taxon:9606"
                                                                                                                                                                                                                High quality sequence stop: 690.
                                                                                                                                                                                                                                            Location/Qualitiers
Email: eqapbs ramail.nih.gov
                         lissue Procurement: ALCC
                                                                                                                                                                      http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 776;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hest Local
                                                                                                                                                                                                                                                                Some
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HASE COUNT
                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NI S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
```

```
DKFZp31300816_rl 313 (syronym: htee2) Homo sapiens chwa rlone
DKFZp31300816_5', mKNA sequence.
ALS97811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST (Poustka, A., Welleureuther, k., Mewes, H.W., Weil, B. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Poustka, A., Wellenreuther, R., Mewes, H.W., Weil, B. and Wiemann, S.).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Heidelberg/Germany) within the cDNA sequencing consortium of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note-"Vector: pTriplEx2: Site_1: StilA; Site 2: StilB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: poustka*mpimg-berlin-dahlem.mpd.de
This is the 5' sequence of the clone insert
Clone trom S. Wiemann, Wolecular Genome Analysis, German Cancer
Research Center (DKE2), Email 8.wiemann@dktz* heidelberg.de;
sequenced by DKFZ (German Cancer Research Center,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Please contact the RZPD: Kessourcenzentrum, Heubnerweq 6, 14059
Herlin-Charlottenburg, GERMANY; Email: clonewirzpd.de.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1599 AAATACACTTTGTGAACGCCTTCTGTCTGAGCACCAGAATTAGAACATATCATCTGGAC 1658
977 GAGTAATGGAATGCATGATTAAATGAGAAGAAGATTATGGATGAAAATTTAAGA TO36
                                                                                         037 AACITICTICAATICACAACA-TTTTTCATALGT-CTTTATTGGCGTGCGCLCTTGAGGTTGT 1094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1539 GAAATCTACCTCTTCACTGTTTTATAAAAAAGTGTATCGGTAGGGTAGGCTATGTGGGT 1598
                                          745 GAGTAATGGAATCCATGCTTAAATCAGAAAGAAGGATTATCCATTCAAAATTTTAGCA 804
                                                                                                               This clone (DKFZp31300816) is available at the RZFD in Berlin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GAAATCTACCTCTTTCACTGT11FATAAAAAG1G1A1CGGC1AGCCTATCTCGGCT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22.9%; Score 725.4; DB 9; Length 727; 99.9%; Pred. No. 1.5e 131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Department Lehrach
Max-Planck-Institute for Molecular Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xrei-"taxon:9606"
/clone="MkrEpil300816"
/clone=lib="313 (synonym: hicc2)"
/dcv_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Thestrasse 73, 14195 Berlin, Germany
Tel: 49-30-84131623
Fax: 49-30-84131128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1,98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           130 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /lab_host-"DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA-collection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No sl sequence available.
                                                                                                                                                                                                                                                                                                                                                                                                                                                ALS97811.1 GI:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               German Genome Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Poustka A.J.
                                                                                                                                                                                  1095 AATGGCCACATATAGC 1110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      161 c
                                                                                                                                                                                                                                  865 AATGGCCACATATAGC 880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    հուտանը.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        726;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ( · S /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                          RESULT 6
                                                                                                                                                                                                                                                                                                                              AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                  VEPSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                      LOCUS
                                            ΩĐ
                                                                                                                                      <u>a</u>
                                                                                                                                                                                       ó
                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                           ò
```

ŝ

Š

Š

 $\frac{1}{2}$ Ë ÷ ŝ $\hat{\Xi}$

```
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OFIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota, Metazoa, Cherdata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.399 IGCHOAAGGAAGGGAGGGGGAAGGAGTGAAAAAGTGGGGTTTGATALTGAAGGATC 2258
HILLITTHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLITHILLIT
1/19 AATTATGATGTGTGCATGTATGGCATATGCAAAGTGAAGATATAGACCTAAAATTCAA 1778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1899 GAGACTGAAAACAAATATTTGCAGTATGCTTCCACGAGGCCCCCTACCTTGTCACCAAT 1958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1229 AATCATTGTAACA-ATAFAAAATCTFOTOATGFTGTTGAAAAAAAAAAAGTGT 1838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1834 ILLIGALCAAAGAAGAGGAGTAFGATTCTATTATAGTATTCTATAACTCGGTCTTCATGCA 1898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1959 ACCTCACATTCCTCGAAGCCCTTACAAGTTTCCTAGTTCACAAGTTCCAGAGTTCCTGAAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ... 9 GAACA101A1ATTTGAGGGGTGAASASTGGATATAAAATTTGAGAAGGTGTGGGAAGAGG 2078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2:79 AACAAAAAIGACICCAAGAICAAGAAICIIAATAATATAAATIGAAATIGGGAACTIC 2138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2139 TGAGAAACTTCCAGAAAAAAAAAFGGTAFGTAFGTAACAAGAGAGAGGGTGTGGGTGAAAAAAAAA 2198
                                                                                                                                                                                                    121 CCTTTTCCAGCACACCCTGCAGAATGAGTATGAAATGAGAGAGGGATTTGGGAGA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               441 GAACATCTATATTTCACCCCTGAAGAGTCCATAIAAAA1TGAGAAATCTAGGAAGAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FOR TRANSPORTED FOR TAXABATAAN TAXABATAAN TAXABATAAN TAXABATAAN TAXABAAN TAXABATAAN TAXA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA Library Preparation, CLONETECH Laboratories, Inc. cons. Library Arrayed by: The L.M.A.G.B. Consortium (LLNA) DNA Sequencing by: Incyte Genomics inc Clone distribution: MGC clone distribution and Construction information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NIH-MGC http://mer/merindh.gov/.
National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                             Lound through the L M A G B Consortium/LLNE at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plate: LLCM1605 row: o column: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence stop: 709.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tissue Procurement: DCID/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               reapply remail nik gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BG610661.1 GI:13662032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 823)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                225% AGAIGAA 2265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BG61066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721 AGATGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ema : 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEFEREN E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JUNIENAL.
```

183510661

Location/Qualifiers

FEATURES

```
(where B = A, C, or G and N = A, C, G, or 1). Average insert size 1.5 kb (range 0.9 4.0 kb). 14/15 clonies contained inserts by PCR. This library was enriched for full-length clones and was constructed by cloniech laboratories (Palo Alto, CA). Note: this is a NIH_MGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2289 NEERGASTOTAAATIIOASOASAACIISSOASAAAIGAOIIOIAGIAGIOGAACAAGAAIGO 2348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2529 AAAA1G:GGAGA:GGAATIGTITFGGGIGA:GGTAAGGGAGTIGATGTTAGGGALIGI 2588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2589 TATTTATACAAGATTGAAAATCTTGTGTAAATCCTGCGALTTAAAAAGTTGTAGCAGATT 2648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2649 GITTPCITCITTPCAAAATTGCTGTGGTTTATGCAIAGTAAGAATGGCCCTAGAGIS 2708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2709 GGAGT COT GALA COLO AGO COTOTOTO SACTACITITO COLLO TITITO TAGO CALALAGOLO A 2768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2889 TTATCCTGAACTCTTCTGCAAAAAIGGATATTATTAGAAATT---AGAAAAAAIIACIA 2945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2946 ATTTTACACAITAGATTTTATTTTACIAITGGAATCIGAIAIACTGIGGIGTGCIIGITITAT (005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301 TATTIATACAAGATTGAAAATGTTGIGTAAATCCTGCCATTTAAAAAGTTGTAGCAGATT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361 GITIPCIFITE VAAGIAAALID TGIGTITIADGAAAAAAAAAATGACTAGAGIG 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421 GGAGTOTFGATAANNYNAGGOTTGTTTGTTTTGTCTTTTTTGTGTTATAGGATATAGGTGA 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541 TAGAAAAIGIGHCIAHCHAGAAAIGCAAHHGAFGGCGGCGAHCACCAAAA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601 TEATOTGAATETETATAAAAALGGATAILAILEEGAAALGAAALGAAAACACAATIACIA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 AAAGGAGAAAAATGAATGATAGTATGATATGTATGTAAA AAGGAAAGAGAGAAAATGATGTTGA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2409-094APCITPATESTAPPETERIAZAGICIOSATICALIGICICIOACASAZGIGACISTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241 AAAATGEGCAGATGCAATTGTTTGGGTGATTCCTAAGCCACTTGAAATGTTAGTGATTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 22.1%; Score 699.6; DB 12; Length 823; Rest Local Similarity 94.8%; Pred. No. 1.6e-126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     indels
                                                                                               /tissue_type="adenocarcincma"
/lab_host="DH10B (T1 phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 271 t

 Mismatchus

/organism-"Homo sapiens"
                                                                               /clone_lib-"NIH_MGC_60"
                     /db_xrel="taxon:9606"
/clone="IMAGE:4737634"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     142 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     148 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  779; Conscruative
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Library.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       262 a
```

```
Enkaryota: Metazou: Chordata: Craniata: Vertebrata: Euteleostomi;
Mammalia: Eutheria: Primates; Catarrhini; Hominidae: Homo.
1 (bases 1 to 76)
3006 AAAATITTGTTTTAATTAAATAAAGGGGAAGAAAGTATAACGATATGATGTATGA 3065
                                                                                                                                                                                                                                      602591312F1 NIH MGN 77 HOMO Sapiens CONA CLORE IMAGE:4717874 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.469 GCATINGATAPPPPPAAAPAAGAAAATIJAGGATCHCAGGACCHTGGTGGACACTGTG 2428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2489 TATGGCCACATTTAATATCTTCAGCTCTTTTGTGGATATAAAATGTGCAGATGCAATTG 2548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2429 TACACCITCTOGATICATICICICICICICACACALGICACIGIATAACTIICCCACGIICIGIT 2488
                   DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution: MGC clone distribution
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NIH MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels 4; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GYAEGGATAPPTCAAAQAAGAAGAAATGAGGAATCTCAGGACTTTGGTGGACATGTG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D.
Email: eqapbs rimail.nih.gov
Tissue Procurement: CENTESTE Taboratories, Inc.
Tissue Propertion: CENTESTE Taboratories, Inc.
Tissue Propertion: CLOWECH Laboratories, Inc.
Tibrary Propertion: CLOWECH Laboratories, Inc.
Tibrary Arrayed by: The L.M.A.G.E. Consortium (LIANL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 12; Length 767;
                                                                                                                                                                                                                         Lincar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tound through the L.M.A.G.E. Consortium/LLML at: http://image.llnl.gov
                                                                            3066 TAPTACTOAAACAGATTIPATAPPIGAGAATGTAAAAGAAGT 3107
                                                                                               777 TACTALIGAA CAGALICATACICAGAATGIAAAAGAACCI 816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21.9%; Score 692.2; DB 12.
97.1%; Pred. No. 4.5e-125;
tive 0; Mismatches 18;
                                                                                                                                                                                                                         ANXE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    279 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plate: LLCM1568 row: h column: 03
High quality sequence stop: 726.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /ordanism."Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  130 q
                                                                                                                                                                                                                                                                                                    B6570456.1 GI:14578109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                125 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (6661) polystrand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 747; Conservative
                                                                                                                                                                                                                                                             mkNA sequence.
B3570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       211 4
                                                                                                                                                                                                                     HC570456
                                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Duery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         e. Hiros
                                                                                                                                                                                                                                          NOTITION
                                                                                                                                                                                                                                                                                                                                                               CREANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HASE COUNT
                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL.
                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                RESULT B
                                                                                                                                                                                                    HC570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    111E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N ...
                                                                                                                                                                                                                   15 6708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ē
                                    ŝ
```

```
/note-"organ: brain: Vector: prwySPoRT 6; 1st strand cDNA was primed with a Not1-oliqo(dT) primer. Five prime end enriched, double stranded cDNA was diquested with Not 1 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ESST 16 - FEB - 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Graniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AL563757 LTI_NFL001_NBC4 Homo sapiens cDNA clone CSODD007XA05 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2789 ANTITATATGIATATTITITATATTTAACATGAACACACACACACAAAAATGIGIGGIGGIATAA 2848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2849 TCTTCCAAATGCAATTTGATTGACT-GGGGATTGAGCAAAATTATGTGTGAAAGTGTTGTGG, 2907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2908 AAAAATGGATATTATTAGAAATTAGAAAAAATTAGTAATTTTAAAAATTAGTATTTAAAATTAGTATTTATT 2967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2968 ITACTATIGGAATCIGATAIACTGIGIGCTIGITITAIAAAAIITIGCIIIIAAIIAAAA 3027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8028 AAAAGGTGGAAGGAAAGTATAAGGATATGATACTATCATACTACTGAAACAGATTTCATA +087
                                                                                                                                                                 2609 TCTIGIGIAAATCCTGCCAITTAAAAAGITGTAGCAGATTGITTCCTCTTCCAAAGTAAA 2668
2549 TTTGGGTGATFCCTAAGCCACTTGAAATGTFAGTCALTEITATATATACAAGATTGAAAA 2608
                                                                                                                                                                                                                                                                                                                                                                         181 TITGGGTGATTCCTAAGCCACTTGAAATGTTAGTCATTGTTATTAGAAGATTGAAAA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541 AAAAATGGATATTAGAAAATTAGAAAAAAATTACTAATTTTAGACATTAGATTTTATT 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                THILL HILLHITHITHITHITH FOR THILLI HILLHITH HILLHIT FOR THE CONTRACT SET TABLET AND THE CONTRACT SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET TO SET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Genoscope - Centre National de Sequencade
HP 191 91006 EVRY codex - France
Email: seqref genoscope.ens.tr, Web : www.genoscope.ens.tr.
                                                                                                                                                                                                        2729 CTGTCTGACTTGCCTTGTTTTGTAWATATAGGTGALGTTTWCTCTTTTTALT
                                                                                                                                                                                                                                                                                                                              2669 ATTGCTGTGTTTATGGATAGTAAGAATGGCCCTAGAGTGGGGAGTCTTGATAACTCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 792)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3088 CCTCAGAATGT-AAAAGAACTTACTGATTATTTTTTTTTATATTAT 3135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Li, W.B., Gruber, C., Jessee, J. and Folayes, D.
Full-Tength cDNA libraries and normalization
Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="neuroblastoma_cells"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="CSODDO07YA05"
/clone_lib="tll_NFL001_NBC4"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         792 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xre1-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AL563757.1 GI:12914464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           prime, mRNA sequence.
AL563757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact, Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1, .792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A1.563757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOULCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 9
AL563757/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOHNNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .qq.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ĝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                          q
                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                            ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ä
```

```
Technologies, a division of Invitrogen 9800 Medical Center Drive Peceville Maryland 20850, usa Pax : (1) 301 616 8371 Email : Iliangalifetech.com URL : http://tulllendih.invitrogen.com" a 148 c 117 a 255 t. 26 315ers
cloned into the Not I and Eco RV sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies. Contact: Peng Liang Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           334 CITAAALMAGAAGAAGAAFGATTAAFGAATTTTAGGAAACTTCTGAAAFTTGAAA 1052
                                                                                                                                                                                                                                                                                                                                                                                                                                      336 AGCIGITALAGOCATIAATGGITOACOTOGAACAGGGAGGGAACH CAGAACAGGAGTGC 395
                                                                                                                                                                                                                                                                                                                                                                                                            05 ACGGATAGTAAAAACAACTAGAAAATGATAGAATTATTGAAGTTCTGTGTAAAGAACA 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       636 AACHCHTCAGACHGAFHTFFFFFFFAGACATHFFFFAAAQAGAGAGAGAGAGAAAAGHAA 695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           816 TTCC1A1 FTTAACAACTGCACAGTGAATCCAAAAGAAGTATACTGAAAAGAGTGAAGGA 875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          876 TATAGGATACATCITTAAAGAGAAATTTGCTAAAAGGTGTGGGACACGGTTGTGTGGAAAT 935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          886 IGAAIGIVATATAGWTGAGGTGAAAAATTTTTATAAAAATTTTATATGAA 607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5:5 TIGICI GGACT IGTAACATCTAATGGAGAGGTTGAAAATG1 TTGTAAAAGGTA 575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     576 CGAAGAATITATCITAAAAATAAAGATCTAGAAGATTATTTTGGAATGATG 635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           486 AACTCTTCAGAYTGATTCTWTAGACAGTTTTTGAAACAGAGAAGACACGACAAAAAGTAA 427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            756 TATOCANDATTAATGATGATTITAAAFTDAGCAAGTGATGAGGTTCAGAAAADCTGAT 815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          246 IWTKONATACWIYITTAAAGAGAAATITGCHAAAGGTGTGTGGGAGGGGTTGTGTGGAAAT 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     936 TGGATCACAGCGATACAAACT166--AGTTCGCTTGTATTACCGAGTAATGGAATCCATG 993
                                                                                                                                                                                                                                                                                                                                                               3; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        126 CITIATICAGAAGGAGGATIAIGGAITCAAAAITIIBGCACACTICIGAAISACAAG 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      596 OCTIGALGAAGAGGTGAATGTAATTOOTOOAÇAÇAÇAÇTÇÇAGTTAGAAÇTGTTATGAAÇAÇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21.9%; Score 692.2; DB 9; Length 792;
93 6%; Pred No 4 56-125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1453 CATITITOAFAIGICITTATIGGGGTGGGGTTGAGGTTGFAAT 1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6 CV11111CAFATGFGTTTAFTGGGGTGCGCTTTGAGGTTGTAAT 22
                                                                                                                                                                                                                                                 56-125;
                                                                                                                                                                                                                                                 Pred No. 4,5e
23; Mismatches
                                                                                                                                                                                                                                                                    Matches 716; Conservative
                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                Quonty Match
                                                                                                                                                           BASE TUNT
                                                                                                                                                                                   NICE
                                                                                                                                                                                                                                                                                                                                                                   <u>ت</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>...</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ===
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
```

Timest PSE of Fire 2002

HM466194 FFF 05 PPP bp mPNA livear FSF 05 FFF 2007 ACHARACHTE 6456973 NIH_MON 92 Homo sapiens cDNA clone IMACK:5576939 5', mRNA sequence.

5', mRNA BM466194

ACCESSION

NOT NOT SET

. . . .

RESULT 10 BM456334

```
ä
                                                                         Homo sapiens
Eskaryota, Mctazca, Cherdata, Cramiata, Vertebrata, Euteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note-"Organ: testis, Vector: pCMV-SPORI6; Site_1: Not1; Site_2: Sall; Cloned unidirectionally; oliqo-dI primed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              full-length clones and constructed by Life Technologies. Note: this is a NIH_MGC Library."

184 c 169 g 323 t 2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2425 TGTGTATTTTGGATICATTGTTTTTTTTTAGATGIGACTGIAIAAGTTTCCCAGGTTC 2484
                                                                                                                                                                                                                                                                                       Tissue Produrement: ATCC constraint Library Library Preparation: Life Technologies, Inc. constitution Library Preparation: Life Technologies, Inc. constitution (LIMI) DNA Sequencing by: The I.M.A.C.E. Consortium (LIMI) Constraintion. MCC close distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://maga.llh.gov.i.j.column.12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2485 IGTTTATGGCCACATTAATATCTTCAGCTCTTTTTCTGGATATAAAATGTGCAAGATGCA 2544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2545 APPTGPPPPGGPPGATTPCCTAAGGCAGTPGAAATGTPAGTGATTGTTATTTTATAGAAGATTG 2604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2605 AAAATGIIGIGIAAAAFGCIGGCATIIAAAAAGIIGIAGGAGATIGIIGGIGLGCAAAA 2664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2725 AGGACTIGITAGACTAGATTIGGCTTTTTTTAGACAIATAGGTGALGTTTGCTGLIGTTTT 2784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 GATAGFATGFATAFCTCAAACAAGGAAATGAGGATCTCAGGACCTTGGTGGACAC 120
                                                                                                                                                                  NIB MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 ATTGITTGGGGGTTGCTAAGGGGGAATGTTAGGATGTTATTATTATACAAGATG 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CATCACAAACTGGCAGAAATGACTTCTACTCGAACACGAATGCAAAAAGCAGAAAATGAAT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2365 GATAGTATGTATAPTTGAAATAAQAAAAAAAGAGATGTTGAGGAGGTTGGTGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301 AAAATCTTGTGTAAATCCTGCCATTTAAAAAGTTGTAGCAGATTGTTTCGTGTTCGAAAG
                                                                                                                    Mammalia: Eutheria: Primates: Catarrhini: Hominidae: Homo.
1 (bases 1 to 972)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Average insert size 2.5 kb. Library enriched for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21.9%; Score 691.8; DB 13; Length 972; 96.7%; Fred. No. 5.3c-125; tive 0; Mismatches 19; Indels 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone="IMAGE:5576939"
/clonc_lib="NiH_MGC_92"
/tissuc_type="embryonal carcinoma, cell line"
/lab_bost="DH108 (phage=resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Plate: LLAM12329 row: } column. 12
High quality sequence stop: 621.
Location/Qualifiers
                                                                                                                                                                                                                   Unpublished (1999)
Contact, Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                        Email: cyapbs::3mail:nih.gov
BM466194.1 GI:18515236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 96.79
Matches 728; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .972
                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sonrce
                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HASE COUNT
                                                                                                                                              PEFERENCE
                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                        JOURNAL.
                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                            TITLE
  VERSION
                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
```

```
linear EST 05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGENCOTRI_640.2743 NIH_MCC_72 Homo sapiens clone iMAGH.5528814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Znore-"ordan: skin, Vettor: pCMV-SPORT6, Site_1, Not1,
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Library constructed by Lite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1266 ACGATGTGAACATCGATGATGGATGCCTTGCATGGCTCTCAGATTGACTTTATTTGA 1325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1326 FOLLALLAAAGAAAGAAAGAGAGAAGGAGGAACTGATCACCTTGAATCTGCTTGTCC 1385
2785 TALLAALITALAIGIALAITITIAALILAAGAIGAAGAGGGTIAGAAAATGIGTGGTA 2844
                                                                                                                                                                                   2905 TOCANANATOGATATTACTAGAAAATTAGAAAAATTACTAATTTATAGAATTTT 2964
                                                                                                                                                                                                                                                                            2965 ATTLIACIALIGGAALCIGALATACIGIG----FGCTTGTTTTATAAAATLITGCTTTT 3019
                                                                                           2845 TCIATCITCCAAATGCAATITGAITGACTGCCCAITCACCAAAAITAICCTGAACICITC 2904
                                         481 TALTAALTIATAIGIATAITITITAATTIAACAIGAACACCCTTAGAAAATGIGIGCIA 540
                                                                                                                 601 TGCAAAAATGGATATTAFTANAAATTAGAAAAAAAATTACTAATTTTACAATTTAGATTTT 660
                                                                                                                                                                                                                                                                                                         National Institutes of Health, Mammallan Gene Collection (MGC) Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL.) DNA Sequencing by: Agencourt Bioscience Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Manmalia: Eutheria: Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 835)
                        21.4%; Score 578; DR 13; Length 835; 100.0%; Pred. No. 2.5e 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            con Library Preparation: Lite Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tound through the L.M.A.G.E. Consortium/LLNL at: http://image.llml.acm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissue type="melanotic melanoma"
/lab_host="DMTOB (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TIKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              137 g 233 t
                                                                                                                                                                                                                                                                                                                                                                         4020 AATTAAATAAAAGCT-GGAAGCAAAGTATAACC 3051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plate: LLAM12206 row: e column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                  Average insert size 2 kb.
Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: cqapbs r'mail.nih.gov
Tissue Procurement: ATCC/DCID/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /ordanism."Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone lib-"NIH_MGG_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         835 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            High quality sequence stop: 647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db xret="taxon:9606"
/clone="IMAGE:5528814"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIH MGC http://mgc.ncl.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BM453724.1 GI:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   710 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 100.0
Matches 678; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5', mRNA sequence.
BM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HM4 5 57 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Juery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
BM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JUNIENA!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Z ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S 11 12 15 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DESTRE
                                                                                                                                                                                   3
                                                                                                                                                                                                                               Ē
                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                      =
                                                                                                                                                                                                                                                                                                                                                                         5
```

```
BI868359 673.201 673.201 673.201 673.3233.001 673.3233.001 NIH_MST_90 Home sapienc cinn cione image:9402622 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota, Metazoa, Chordatu, Craniata, Vertebruta, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1806 TCCTCATGCTGTTCAGGGGATCAAAGGTGTTTGATCAAAGAAGAAGAGTTGATTC 1865
                                                                                                                               1446 ALCICCAAAAAAAAAAGGITGAAGIAGAAAIGIAAAIICIAGGAAALGAAGAGAGAGA 1505
                                                                                                                                                                                                                  1506 AGCAACCTCAGCCTCCAGACCCAGAAGCCATTGAAATCTACCTCTCTTTCACTGTTTTA 1565
                                                                                                                                                                                                                                                                                                          1566 TAAAAAAGTGTATCGGCTAGCCTATCTCCGGCTAAATACACTTTGTGAACGCCTTCTGTC 1625
                                                                                                                                                                                                                                                                                                                                                                                                1626 FGAGGACCCAGAATTAGAACALATGALCTGGAGCTTTTTCAGGAGACTGTGGAGALGA T648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1746 ATGCAAAGTGAAGAATATAGACCTIAAATTCAAAATCALGGAACAGAAACAAAGATCT 1805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1866 TATTATAGTATTCTATAACTCGGTCTTCATGCAGAGACTGAAAACAAATATTTTGCAGTA 1925
                                            1386 TCTTAATCTTCCTCTCCAGAATAATCACAGAGAGAGATATGTATCTTTCTCTGTAAG 1445
                                                                                                                                                                           193 ATCTCCAAASAAAAAASTTCAACTACGGGTGTAAATTCTACTGGAAAATGCAGAGACACA 252
                                                                                                                                                                                                                                         17.7
                                                                                                                                                                                                                                                                                                                                                                                                                     493 ATGCAAAGTGAAGAATATAGACCTTAAATTGAAAATGATTGTAAGAGCATAGAAAGGATGT 552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             553 TOOTGATGCTGTGCAGGAGACATTCAAACGTGTTTGATCAAAGAAGAGGAGTATGATTC 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NIL MEET Hate, //meet as i.min.acv/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Finit: cgapbs-ramadl.nth.gov
Tissue Procurement: AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
73 TCTTATTAAACAATCAAAGGACGAGAAGGACGAACTGATGAATCTGTCT 132
                                                                cDNA Library Preparation: Lite Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                    found through the L.M.A.G.E. Consortium/LLML at:
http://image.llnl.gov
Plate: LLAMI2026 row: k column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      High quality sequence stop: 668.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B1868359.1 G1:16042032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1926 TGCTTCCACCAGGCCCC 1943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    673 TGCTTCCACCAGGCCCCC 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 672)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BI868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B1868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTHERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BI868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ج
                                                                                     3
                                                                                                                                                                      D.
                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                       â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
```

```
REFERENCE
                                                                                                                                                            JOURNAL
      KHYWORDS
                                                                                                                       ALLIHORS
                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                          TITLE
                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ċ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ċ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST 09-AUG-2000
                                                                                             /note-"Organ: liver; Vector: pCMV'SPORT6, Site_1: Not!; Site_2: Sall, cloned unidirectionally, oligo-dT primed Average insert size 1.7 kb. Library enriched for tull-length clones and constructed by Life Technologies. Note: this is a NH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BE539278 797 bp mRNA linear EST 09-AUG-20
601063567F1 NIH_MGC_10 Homo sapiens cDNA close LMAGE.3449873 57,
                                                                                                                                                                                                                                                                                                                               2027 ATALLICACCCTGAAGAGTGGATATAAAATTTGAGAAGGTGTGGGGAAGAGGAAAAA 2086
                                                                                                                                                                                                                                                                                                                                                                                                          2087 TGACTCCAAGAICAAGAATCTTAGTAICAAITGGTGAAICAFICGGGACTTCTGAGAAGT 2146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2:47 IOCACAAANBAANOACAYCONATGTAACACCAACCAGCTOTCOTCAAAGAAGAAGAGTGGYGAAG 2206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2267 PAGATGGAAGTAAACATCTCCCAGGAGACTCCAAAATTCAGAGAAAACTGGGAAAAATGA 2326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.427 CTTCTACTOGAACAACAAGGAAAGCAAAAATGAATGAATGGATGGATACTAAAAA 2386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Z 187 AGGAAGAGAAAAIGAGGAICIFAGGAGCTIGGIGGAQAQIGIGIADACACTCTGGATTCATT 2446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2447 GICTOTORGAGATOTGACTGTATAACTTTCCCAGGTTCTGTTTATGGCCACATTAAATAT 2506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2507 CITCAGCIPTITITICICATATAAAAIGTGCAGATGCAATTGTAATTGGGGTGATTGTAAGG 2566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2547 CACTICAAAIGTTAGICATTGTTATTATACAAGATTGAA-AATGTTGICTAAAATGCTGC 2625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 GAAGCAACCTCCTAAACCACTGAAAAAAAAGGGTTTGATATTGAAGGATCAGATGAAG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (01 CITCIACICGAACACGAATGCAAAAGCAGAAAAATGAATA3-ALG-ALG-ALG-AAA-A 66)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 IGACTCCAAGATCAAGAAFCTTAGTATCAATTGGTGAATCATTCGGGACTTCTGAGAAGT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421 GICLCICACAGATGICANTATAAGITTECCAGGTTETGTTTATGGCCACATTAATAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481 CITCASCICITITITGTGGAFATAAAATGTGCAGATGCAATTGTTGGGTGATTATTAAAA 540
                                                                                                                                                                                                                                                                                              1, Gaps
                                                                                                                                                                                                                                                                                                                                                                       1 AFATTICACCCTGAAGAGTCCATATAAAATTTCAGAAGGTCTGCCAACACAAAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 660; DB 13; Longth 672;
Pred. No. 8.9e-119;
0; Mismatches 0, Indels
                                                        /Lissue type "adenocarcinoma, cell line"
/lab_host="DH10B (phage=resistant)"
                  /clone="IMACE:5402622"
/clone=lib="NIH_MGC_90"
/db__vref = "taxon:9606"
                                                                                                                                                                                                                                                   20,4%;
99,98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BE539278.1 GI:9767923
                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZERS ATAGIAAGAAIG 2697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661 ATAGTAAGAATG 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA sequence.
                                                                                                                                                                                                                                                       Çipery Mateh
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BE514278
                                                                                                                                                                                                                                                                                          Matches 671;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                            HASE OF UNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 14
RE5 3 4 2 7 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A. C. E. S. S. L. J. N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                 NICE S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     χ.
Ξ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UNITS
                                                                                                                                                                                                                                                                                                                                                                                                                                                =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        >
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
```

```
/note-"Organ: cervix: Vector: pGMV-SPORT6: Site_1: Not1: Site_2: Sall, Clencd unidirectionally. Primer: Oilgo dL. Average insert size 1.5 Kb. Libialy prepared by Life Technologies.
                                                                             Eukaryvia, Metazva: Chordata: Craniata; Vertebrata: Euteleostomi;
Mammalia; Eutheria: Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 797)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1814 CTGTTCAGGAGACATTCAAACGTGTTTTGATCAAAGAAGAGGGGTATGATGTTTTATAG 1873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1874 TATTICTATAACTCGGTGTTGATGGAGAGAGAGAAAGAAATATTTGCAGTATGGTTGCA 1533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1934 CCAGGCCCCIACTIGICACCAAIACCICACAFICCICGAAGCCTTACAAGTTTTCTA 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2114 CAATUOGTGAATGGGGAGTTGTGAGAAGTTGGAGAAATAAATGAGATGGTALGTA 2173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2174 AFASARAN SERTISTISTISTAAABAASHOOTISTAASIAASIAA 2232 HHIIIIIHHHHHHHHHHHHHH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1994 HITOROCOTIACERATIOCIARACERANA (ACTAINO COTONO COTONA (ACTAINO COTONA (ACTAINO CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR (ACTAINO CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGY clone distribution: MGY clone distribution information can be found through the L.M A G E. Consortium/LLNI at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2293 GACHOPAAATTIPAGPAGAAATTOCAGAAATGACHICAGAAPA GGAALGGAAAA 2351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60 TATTCTATAACTCAATCIICAIGCAGAGIGAAAATGAAAATA-TTTGCAGIATGCTTCCA 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  359 APAGEGACETGTGCTCAAAASAAGTGCTGAAGGAAGCAAGCCCTGCTAAACCACTGAAA 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            мин-мЭС http://mgc.nci.nih.gcv/.
National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    239 AAATITCAGAAGTCTGCCAACAACAAAAATGACTCGAAGAAGAAGTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2233 AAACTACGCTTTGATATTGAAGGATGAGATGAAGGAGA FGGAAGTAAACATGTACAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20.1%; Score 643.6; DB 10; Length, 797; 95.8%; Pred. No. 1.4e-115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Incyte Genomics, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONA Library Preparation: Life Technologies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        207 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    http://image.llnl.gov
Plate: LLAM8427 row: f column: 16
High quality sequence stop: 696.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /close_lib="NIH_MGC_10"
/cell_line-"MGC36"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="IMAGE:3449873"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cqapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  167 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /lab_host.="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONA Library Arrayed by.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           lissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  171 c
                                                                                                                                                                                                                                                                                                                                                                Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           797
                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        252 a
human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 747;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
```

us-09-026-459a-44.rst

```
2475 TCCCAGGITCICITITAIGCCACAITIAAIAICTICACCICIITITGCATAIAAAAIG 2534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BM264005/6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Oy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                         Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib="NHH MGC_51"
//issue_type="combryonal carcinoma"
/lab host="billob (II phage-resistant)"
/note="burdant lestis: Vector: pNNF-LHR (Clontech); Site_);
Sill (agreeretegger); Site_2: Sill (agreerlatagger);
Bomble stranded cDNA was prepared from cell line RNA, 5'
and stranded cDNA was prepared from cell line RNA, 5'
and stranded cDNA was prepared from 3 tollows: 5'
adaptors were used in cloning as follows: 5'
adaptors cell strandagger(GARGACTATAGGOC-3' and 3' adaptor
sequence: 5'-ATTCTANAGGCGCGACATG-dT(30)BN-3'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HG516219 682 BH-ABC_61 HOMO Sapiens CDNA clone IMAGE:4775332 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               contained inserts by PCR. This library was enriched for full length clones and was constructed by Clontech
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (where B = A, C, or G and N = A, C, G, or I). Average insert size 1.75 kb (range 0.9 4.0 kb), 15/15 colonies
                                                                             2.452 OPAGAAAFGAATGATAGPAFGGATAGGTGAAAGAAGGAAGAAATGAGGATGTGAGGA 24.11
                                                                                                                                                                                                                                                                                                                                                                                                     2472 CTTTCCCACCTCTCTTTALGCCCACATTAATAFCTTCACCTCTTTTCTCTCGCATATAAA 2531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2532 ATGITCAGATGCAAFTGETTTGCTGATFCCTAAGCCACTTGAAATGTTAGTCAFTGTTAT 2591
                                                                                                                                                                                                                                           2412 O TEGSTOGACACIGIOTACATAGAITAATIGIOTAGAGAGATGTGATATAA 2471
                                                                                                                                                                                                                                                                                 HELLITT THEFT THE TOTAL SACRET STATES TO A CONTROL OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE STATES OF THE 
                                                                                                                                                                                                                                                                                                                                                                                                                                           715 PTGTGGGGALGCAAATG FLUHT HTHTHT FLILLT FLIL FLIL FT T 773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      UNA Sequencing by: Incyte Genomies, inc.
Clone distribution: MGC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLNL at.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Laboratories (Palo Alto, CA). Note: this is a NIH_MGC
479 GAGT CYAAATTT CAGGAAACTOGCAGAAATGACTTCTACTGGAAGGGAATGCAAAA 538
                                                                                                                   National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cDNA Library Preparation: CLONELECH Laboratories, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 642.2; DB 12; Longth 681;
Prod. No. 2.7e-115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  259 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Plate: LLCM1650 row: b column: 05
High quality sequence stop: 679.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /orqanism "Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 681)
NIH MGC http://mgr nci nih qov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xret="taxon:9606"
/^fegn="!MATE:477542"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: cqapbs ramail.nih.qov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/pualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  104 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                seguence: 5′-A]
(where B = A, C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BG616219.1 GI:13667590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 29.4%;
Best Local Similarity 98.4%;
Matchine Cin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  108 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . £.8.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOUTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NETTNIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A CESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       H(36]6219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NI::IX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SILVE
                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
```

3; Gaps

Indels

. œ

0; Mismatches

Matches 670; Conservative

```
DRIGOROUS STREET HORO SADICTS CON STREET TO SWIRE HUMAN FOR STREET HORON SADICTS CON STREET TO SWIRE HUMAN FOR STREET HORON SADICTED FROTEIN : MRNA SEQUENCE.

BM26400 BCT NOBLASTOMA-ASSOCIATED FROTEIN : MRNA SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    [ (bases 1 to 618) Melton, Fronty, St., Permitt, A., Lee, C., Karstner, K., Lemishka, L., Scearce, M., Brestelli, J., Gradwohl, G., Clitton, S., Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistan, A., Schmitt, A., Theising, B., Ritter, E., Ronko, L., Hennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishwill, R., Williams, T., Jackson, Y., and Bowers, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota, Metazoa: Chordata; Craniata: Vertebrata; Euteleostomi;
Mammalia: Eutheria: Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3015 CTTTT--AATTAAATAAAAGCTGGAAGCAAAGTATAACCATATGATACTATGATACTACT 3072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2655 TCTTCCAAAGTAAAATTGCTGTGCTTTATGGATAGTAAGAATGGCCTAGAGTGGAGTC 2714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2835 ATGTGTGCTATCTATCTTCCAAATGCAATTTGATTGACTGCCCATTCACCAAAATTATCC 2894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2895 TICAACTICTICOTOCAAAAATGGATATTACAAATTAGAAAAAAAATTACAA 2954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3014
                                                                                                 2535 TOCAGATIGMATIGMATICON GARACTAGA AACTAGAAATA LAGAALIGMATIMA 2594
                                                                                                                                                                                                                                       2595 TACAAGATTGAAAATCTLGTGTAAATGCTGCCALITAAAAAGTTGTAGAAGATLGTTLCC 2654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120 TACAAGATIGAAAATCTIGIGAAAACCIGGCALILAAAAAGUGAGAAJIGTITIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240 CTGATAACCAGGCTGTCTGACTACTTGCCTFCTTTGTAGCATAACGGATCTTTG 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480 APPAGATTPTATTPTACTATTCGAATCTGATATACTGTGTCCTTGTTTTATAAAATTTTG 549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540 CTTTTAGATTAACATAAAAGGIGGAAGGAAAGIAFAACCATAIGATAGIAFFAFFAGT 599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contart: Douglas Melton, Klaus H. Kaestner, & Hireshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                     180 TCTTCCAAACFAAAATTGCTGTGCTTTATGGATAGTAAGAATGGCCTAGAGTGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2715 CTGATAACCCAGGGGTGTGTGTAGTTTGGGTTGTTTTGTTTTAGAATAACGAATGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2955 ATTAGATTTTATTTTAGTATTGGAATCTGATATAGTGTGGTTGTTTTATAAAAFTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2775 CTCTTGTTTTTATTATTTATATGTATATTTTTTATTTAACAGAACACACAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Barvard University, Howard Bughes Medical Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Endocrine Pancreas Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Endocrine Panereas Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3133 TATGTTTTAAATGAGGALTA 3153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            660 TATCITITAAATGAGGGATTA 680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BM264009.1 GI:17927049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
```

```
/note-"Organ: Fancreas, Vector: pAluescript SK(); Site.]:
Not!: Site.2: Xho!; chNA made by oligo-dr priming.
Site.solected on agarese pol. Average insert size.
Xhor site was destroyed after directional cloning.
Maplified once. Contact information: Hiroshi Inoue, MD,
Mctabolism Div. (Alan Permutt Lab), Washington University School of Medicine, Box 8127, 660 South Euclid Ave., St.
Louis, MO 6110, E-mail: hinoue@imgate.wustl.cdu, Tel:
all4-62-1916, 108 q. 183 t.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                      Library was constructed by Dr. Hiroshi Inoue DNA sequencing by: Washington University denome Sequencing Center For Information on obtaining a clone please contact: Dr. Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.415 TGGCAGAAATGACTTCTACTCCGAAAAGCAGAAAATGAAAATGATAGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2495 CACATITAATATCTTCAGCTCTTTTTGTGGATATAAAATGTGCAGATGCAATTGTTGGG 2554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2855 AAATGCAATTTGATTGACTGCCCATTCACCAAAATTATCCTGAACTCTTCTGCAAAAATG 2914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2375 ATACCICAAAGAAGGAAGGAAATGAAGATCICAGGACCTIGGIGGACACTGIGGIAGTGIACACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2535 IGATTCCIAAGCCACTIGAAAIGTTAGICATIGTTATTTATACAAGATIGAAAAICTIGT 2614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2675 GIGCITIAIGGATAGTAAGAATGGCCCTAGAGTGGGAAGTCCTGATAACCCAGAGTCTTGTGT 2734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2235 GACTACTTTGCCTTCTTTTGTAGCAIATAGGTGATGTTTGCTCTTGTTTATTAATTTA 2294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.7 INTEGATEMATIGICICICACAGAIGTGACTGIATAACTTICCCAGGTTCTGITTATGGC 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              317 GTAAATCCTGCCATITAAAAAGTIGIAGCAGAFTGTTTCCTCCTAAAAGTAAAAFTGCT 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      197 GACTACITTGCCTTCTTTGTAGGATAATGTTTGCTCTTGTTTTATTAATTTA 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  147 IATGIAIATITITITAATITAACAIGAACACCITAGAAAATGIGICCIAICIACC 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Concry Match. 19.5%; Score 617; DB 13; Length 618; Best Local Similarity 100.0%; Pred. No. 2.2e-110; Matches 617; Conservative 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                                                                                                                                     /organism-"Homo sapiens"
/db_xre1-"axon:9606"
/clone_lib-"HR85 islet"
/tissue_type-"Putilied pancteatic islet"
/lab_host-"Putilied pancteatic islet"
                                                                                                           Email: dmelton@biohp.harvard.edu
                                                                                                                                                                                                                                                  Seq primer: -400P from Gibco
High quality sequence stop: 426.
                                                                                                                                                                                                                                                                                                         Logation/Qualifiers
                                                                                                                                                                                                                       (hinoue sim.wustl.edu)
                                                    rel: 617-495-1812
                                                                                                                                                                                                                                                                                                                                      1. .618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21 4 a
                                                                                                                                                                                                                                                                                                                                         2011 Es
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HASE . HNT
                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NECT N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   يَ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \geq_i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \hat{\bar{\Xi}}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>...</u>
```

```
' Oy 2915 GATATTATTAGAAATTA 2931
.. bb 17 GATATTATTAGAAATTA 1
```

Seatch completed: January 18, 2003, 04:10:13 Job time : 2798.89 secs

```
Gendore version 5.1.3
Copyright (c) 1993 - 2003 Compugen Etd.
```

nucleic search, using trame_plus_p2n model M protein January 17, 2003, 18:27:24 ; Search time 1763:22 Seconds

(without alignments) 7320.587 Million cell updates/sec

09 026 459A 45 Perfect score:

I MPPKTPRKTAATAAAAAEP.....TPMQKQKMN9SM6TSNKEEK 797 Sequences

Yqapop 10.0 , Yqapext Fqapop 6.0 , Fqapext Delop 6.0 , Delext variety , 0.01 dodepx HLOSUM62 Scoring table:

16154056 seqs, 804774376 residnes Searched: 42308142 Total number of hits satistying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Maximum Match 100% Listing first 45 summaries Post processing: Minimum Match 08

command line parameters:

YGAPEXT-0.5 -DELOP-6 -DELEXT-7 YGAPOP-10

ACCASTO ONESE (13)
BECSTOR (COLORS SCATULE OF ACCASING BULL (COLORS SCATULE OF ACCASING BENERAL BENEROLS (BENEROLS BENEROLS BENEROLD BENER

BM490416 AW502887 AA072789

833.5 824 815.5 814.5

HQ222227 HM456728 AW503514

2083 14 C 14 80 27 80

> 784 683 199

BF827047

AW951604 HE285796 BF466536

H1868459

B1696841

C82304

BG244088 BE931236 BM475603

1001 484

858 851

ALC92790 BE5 19278

947.5 408 882 879.5 869.5

AL120941

batabase :

em qss_vit:* em qss_fun:* em_qss_hum:* dss_pin:* 4SS INV: * em estium:* em_estom:∗ em_esthum:* em_estpl:*
em_estro:*
em_hte:* em_estmu:* qb_est5;* em estba:* db est2:• qb est4:* qb_est4:* qb_est 1:* db dss:* 5 €

em_dss_mus:* em_dss_other:*

*:ord_ssp mo

em_qss_rod:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution. SUMMARIES AK011246 BM453724 BM450031 AV715533 BG149050 BF144857 ALS99633 ALS64757 BE082846 BG25 454 4 AW 168234 AW58 +181 AA763485 AL597811 Onery Score Match Length DB 1016 1004

BE082846 RC2 BT064

BM561083 AGENCOURT

AKO11246 Mus muscu EM45 4724 AGENCOURT BM450031 AGENCOURT AA763411 vw54a04.r AL599633 DKFZp313P AL563757 AL563757 BG25354 602364278 B1151568 662916108 AV715544 AV715544 Is1149050 uu88e01.y BF144857 601790343

AA763485 VW54h01.r

AW168244 CM3 H1018

BF560103

AL599105

ALS99105 DKFZp414G BF560104 UL R AL e

AW951604 ES1363674 BE285796 601096510 011261109 65189818 BF998490 CM2-GN016

BE466536 UI-M CGOD AI745644 tr24b06.x AI745643 tr24b05.x BMRO2736 AGENCOURT

BF998490

A1745643

B1696841 603344967

linear EST 20 FEB 2002 BM561083 1051 bp mRNA linear EST 20 FEB 200 AGENCYOURT_6566138 NIH_MGC_67 Homo sapieus cDNA clone IMAGE:5550905 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Mominidae, Homo, 1 (bases 1 to 1051) NIH MAC http://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Gene Collection (MAC) BM561083.1 GI:18806044 5', mkNA sequence. HM561083 Homo sapiens human. DEFINITION ORGANISM AUTHORS TITLE RESULT 1 ACCESSION REFERENCE KEYWORDS SOURCE VERSION

```
/clone_lib="NIH_Mod_ov
/listor_type "retinoblastoma"
/lab_wer_Dillo (phage-resistant)"
/had-wer_organ wyw. Worder: p="Mw-Spoint6; Site_i: Noti;
/had-wer_organ wyw. Worder: p="Mw-Spoint6; Site_i: Noti;
/site_2: Sall; cloned unidirectionally. Primer: Oligo dT.
/site_i: heart size 1,75 kb. Library wanstructed by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by, Avencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the 'M A G E Consortium_ALNLA. At:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    302 AlaValetyeljethethyeysValethathethySarstaArtyrEysLe, 51;ValAcqLeu, 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       422 TyrTyrAraValMetGluSerMetLeuLysSerGluGluGluArqLeuSerIleGluAsn 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 362 ValValMetAlaThrTyrSerArgSerThrSerGlnAsnLeuAspSerGlyThrAspLeu 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             48? SerPheProTrpIloLeuAsnValLeuAsaLeuLysAlaPheAspPheTyrLysValIle 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              402 Gluser Phot Letysalad ludlyasni euthrangd inmet tiletyshist eudluang 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          422 CysslaHisArqIleMetGlaSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeu 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        442 TletyssthssertysAspAraGluttyProffbrAspHisLougluSorAlaCysProf ou 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              424 ATTAAACAATCAAAGGAPPGAGAAAGAATTAATGATTAACTTGAAFCTGGTGTT 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       462 AsintenProticuGlinAsinAsinHrsThrAlaAlaAspMctTyrLicuScrProValArgScr 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 GCTG10000ACACACACHTG10GAAATTGGATGACAGATACAAACTTGGACTTCGCTTTG 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 others
                                                                                  CONA Library Proparation: Life Technologies, inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ء
18ء
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Average insert size 1.75 kb. Technologies."
                                                                                                                                                                                    http://image.llnl.gov
Plate: LLAM12263 row. m column, 18
High quality sequence stop: 737,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          299 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
                       Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                     /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-026-459A 45 (1-797) X RMSG1083 (1 1051)
                                                                                                                                                                                                                                                                                                                           /clone_lib="NIH_MGC_67"
                                                                                                                                                                                                                                                                                                            /db_xref+"taxen:9606"
                                                                                                                                                                                                                                                 Location/Qualitiers
                                            egapbs ramail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        £ 267
                                                             lissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3.53c 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1551.00
93.26%
91.50%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    37.438
                                                                                                                                                                                                                                                                    .1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            130 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                              Email:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mery Match:
                                                                                                                                                                                                                                                                        1.03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INI
L-URNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fred. No.
                                                                                                                                                                                                                                                 FEATURES
                         - MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SCOPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ē.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
```

```
881 bp mRNA linear HST 02 MAY-2002
57 MRNA sequence.
BG220275 G1:20401675
HSC2: HST. G1:20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa: Chordata; Graniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Frimates; Catarrhini; Hominidae; Homo.
                   502 %trSerAlaPhcGlmThrStm.ysFrokeuLysSerTorSerLeuSerLeuSerLeuSerTyrtys 52;
                                                                                                                                                          522 tysValTyrArgLeuAlaTyrLeuArgLeuAsnThrLeuCysGluArgLeuLeuSerGlu 541
                                                                                                                                                                               582 LysVallysAsnileAsp leatysPhelysflefleValThrAlaTyTlysAspheuPr 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    691 OHisAlaValGLnGLnZhrFkeLysArqVal·LeulleLysGluGlu-TyzAspSer 620 [FH][F] [FH][F] [FH][F] [FH][F] [FH][F]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA Sequencing by Ageneral Biserburg Orreration Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
482 ProLysLysLysGlySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGlnAla 501
                                                                                                                    604 ACCTERACOTTO AGACOTAGA AGA TIGA A ATOTOTOTOTOTOTOTATATAA 663
                                                                                                                                                                                                                                                                                                                                                                                                                                              844 AAAGTGAAAGATATAGACCTTAANATICAAAATGGTTGTAAGAGGATAGGAGATGTTGC 903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          904 TOATGOTGNTCAGGAGAGATTCAAAGGTGTTTGATCCAAGAAGAGGGGGGTATGATGCC 963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NIH-MGC http://mgc.nci.nih.gov/.
National institutes of Heaith, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        964 TAIAIAAGNATIOTAIAAGTOGGGOOTIIIGAIGGAAGGAGACIGAAAAACCAAAIA 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PhelyrAsiSerValPheMetGlnArgLeuLysThrAsnile 637
                                                                                                                                                                                                                                           542 HisprodutengluHisIleIleTrpThrLeuPheGlnHisThrLeuGlnAsaGluTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDNA Library Preparation: Life Lechnologies, Inc. cona Library Arrayed by: The L M A G {\rm P} Consortium (LLNL.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   http://image.linl.gov
Plate. LLAM13287 row. e column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        264 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref-"taxon:9606"
/clonc=":MACB:6014522"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cqapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             155 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 881)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             149 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  627 Helleval.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             313 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                uman.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1,00018
                                                                            ä
                                                                                                                    Ξ
                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                       Ċ
                                                                                                                                                                                                                                                                                                                                                               â
                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
```

NI CIN

341 LysSerGluGluGluArqLeuSerIIeGlnAsnPheSerIysLeuLeuAsnAspAsnIIe 350 111 AlaValileProlleAsuGlySerProArgThrProArgArgGlyGlnAsnArgSerAla 130 151 GluCysAsniloAspGluValLysAsnValTyrPhetysAsnPhefleProPheMetAsn 170 SerlandlyLeuValThrSerAsndlyLeuProGluValGluAsnLeuSerLysArgTyr 190 211 ThriconducthraspSerileaspSerPheGluThrGlnArgThrProArgLysSerAsn 230 251 The Ginglin Leumet Met Helzen As is Ser Ala Ser Aspolin ProSer Glu Ashi, eu He 270 291 HeelyTyrilePheLysSlaLysPheAlaLysAlaValGlyGluGlyCysValGluile 310 545 ATAGGATAGATCHTAAAGAGAAATTTGCTAAAGCTGTGGGACAGGGTTGTGTGGAAATT 704 311 GlySerGlnArglytLysteuClyValArgleuTyrTyrArgValMetGluSerMetLeu 330 141 Ard:TeAlalysCluLenGluAsnAspihrArd[LetTeGluValLeuCysLysGluHis 150 345 GAAGAAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTATTTTTGGATCATGATAAA 404 585 TOCTATITTAACAACTGCAGATGCAAAAGAAAGTATACTGAAAAGGAGTGAAA 705 GGATGACANGGATACAAACITGGATTGGCTTGTATTACCGAGTAATGGAATCCATGCTT 764 DKFZD11 000016, Cl. 413 (Synonym: hlee2) Homo Sapiens cDNA clone DKFZD1100016 5', mKNA sequence. 241 LeuAspGluGluValAsuValIleProProHisThrProValArqThrValMetAsnThr 16% COGNIAGOAAAAVAACIAGAAAAIGAIACAAGAAITAIIGAAGIICICIGIAAAGAACAI 451 PhellisMetSer LeuDeuAlaCysAlaLeuGluValValMetAlaThrTyrser 368 Conservative: Mismatches: Matches: amath: indels: Gaps: 15 09 026 459A 45 (1 797) x BQZZ0Z75 (1-881) 727 bp ALS97811.1 GI:15160502 1272.00 98.08% 97.69% 30.69% Best Local Similarity: AL597811 AL597811 Percent Similarity: human. Aliquinent Scores: EST OTHER MATCHE DEFINITION ACCESSION Fred. No. VERSION KEYWORDS RESULT + AL5.97811 田、田田市 15 a 'US = == 7.7 5 5 ÷ Š <u>-</u>2 5 = Ś 5 â 5 3 2 3 3 Š ŝ Š

mRNA

```
Poustka,A., Wellenfeuther,K., Mewes,H.W., Weil.B. and Wiemann,S.).
EST (Poustka,A., Wellenfeuther,R., Mewes,H.W., Weil.B. and Wiemann
                  Eukaryola, Metazoa: Chordata: Craniala; Vertekrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 727)
                                                                                                                                                                                                                                                                                                                                                                 Heidelberg/Germany) within the CDNA sequencing consortium of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /dab.host-"DH10B"
/note-"Vector: plriplEx2; Site_1: Sli1A: Site_2: StilH;
                                                                                                                                                                                                                                                                                                     Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKFZ); Email s.wiemann.dklz heidelberg.de;
sequenced by DKFZ (German Cancer Kesearch Center,
                                                                                                                                                                                                                                                                                                                                                                                                     No sl sequence available.
This clone (DKEZPA1300BLE) is available at the KZPD in Berlin.
Please contact the KEZEG: Ressourcencentium, Heuhnerwey 6, 14059
Berlin-Charlottenburg, GERMANY; Email: clone-tzpd.de.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  £ ]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         632 ArgLeuLysThrAsnileLeuGlnTyrAlaSerThrArgProProThiLeuSerProlle 651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62 AATACACTTTGTGAAGGCCTTCTGTGTGAGGACCAGAATTAGAACATATCATGTGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              552 LeuPhedinHisThrLeudinAshGluTyrGluLeuMetArgAspArgHisLeuAspGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                572 IleMetMetCysSerMetTyr31yIleCysLysVall,ysAsulleA.plud.iledas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            592 HetleValThrAlaTyrtysAsptouProHisAlaValGlmMuthrPhoLysArqVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    532 AsnThrLeuCysGluArgleuLeuSerGluHisProGluLeuGluHisTlellettpThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Department Lebrach
Max-Planck-institute for Molecular Geneties
                                                                                                                                                                                                                                                                                         sequence of the clone insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib="313 (synonym: hlcc2)"
/dev_stage="adult"
                                                                                                                                                                                                                                                                Email: poustkaëmpimg-berliu dahlem.mpg.de
This is the 5' sequence of the clone inser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
Mismatches:
                                                                                                                                                                                                          Innestrasse 73, 14195 Berlin, Germany
Tel: +49-30-84131623
Fax: +49-30-84131128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          198 +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .727
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-026-459A-45 (1:797) x AL597811 (1:727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone-"DKFZp 41300816"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ath_wref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            130 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Localion/Qualitiers
                                                                                                                                                      Contact: Poustka A.J.
                                                                                                                                                                                                                                                                                                                                                                                     German Genome Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1254.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99.59%
99.59%
30.26%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          161 c
                                                                                                                                Unpublished (1999)
Nomo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Source
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                JOURNAL
                                                        REFERENCE
                                                                          AUTHURS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                              TITLE
                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ö.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST 14-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
```

```
/hote-"data source-MGD, source key-MGT-97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref "FANTOM_DB:2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /dev_stage "10 days embryo"
1. .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="MGH:MG1-1905260"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone-"2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /Strain "C57ML/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             evidence: ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .>1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Host: SOLR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          11217851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTHURS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        dene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AR011246 HFF 14-1AN-2002 MAS musculus 10 days embryo whole body CDNA, RIKEN [ull-length enriched library, clone-2600017M22-re-inoblas-oma 1, Full insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Carninci,P., Shibata,Y., Hayatsu,N., Suqahara,Y., Shibata,K., Ltch M. Konno H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y. Normalination and subtraction of captrapper selected cDNAs to prepare full length cDNA libraries for rapid discovery of new genes Genome Res. 10 (10), 1817-1830 (2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Shibata,K., Itoh,M., Aizawa,K., Nagaoka,S., Sasaki,N., Carninci,P., Konno, H., Akiyama,J., Nishi,K., Kitsunai,T., Tashiro,H., Itoh,M., Sumi,N., Ishii,Y., Nakanura,S., Hazama,M., Nishino,H., Itoh,M., Yamamolo, R. Matamoto,H. Sakayahii,S., Ik-yami,T., Kashiwaqi,F. Fujiwake,S. Inoue,K. Toqawa,Y. Izawa,M., Phara,E., Walahiki,M. Voledu,Y., ishikawai,. Gzawa,K., Tanaka,H., Matsunta,S., Kawai,J., Olaryti,Y., Matamatsh.M., Monoc,Y., Kita,A. and Hayashizaki,Y. RIKKN integrated sequence analysis (PrSA) system--384-format Gequencing pipeline with 384 multicapillary sequencer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kawai.J., Shinagawa,A., Shibata,K., Yoshino,M., Itoh,M., Ishii,Y.,
Arakawa,T., Hara.A., Fukunishi Y., Konno H., Adachi.T., Fukuda.S.,
Alzawa,K., Izawa,M.: Nishi.K., Kiyosawa,H., Kondo,S., Yamanaka,I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mammalia, Eutheria, Rodentia, Sciurognathi: Muridae: Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bukaryota: Motaroa: Chomdata: Oraniata: Vertobrata, Batelepstomi,
                                                                                                     422 CCTCACATTCCTCGAAGCCCTTACAAGTTTCGTAGTTCACCCTTACGATTCCTGAAGGG 481
                                                                                                                                                    672 AsalleTyrileSerProLeuLysSerProTyrLysileSerGiaGlyLeuProThrPro 691
                                                                                                                                                                           692 ThrLysMetThrProArgSerArgIleLeuValSerIleGlyGluSerPheGlyThrSer 711
                                                                                                                                                                                                                                                                              712 GiuLysPheGlnLysIleAsnGlnMetValCysAsnSerAspArgValLeuLysArgSer 731
                                                                                                                                                                                                                                                                                                                                                                                                 (52 Proffis11oProAtgSetPtoTyttysPhaPtoSetSetPtoLeuArg11eProClyCly 671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Much miscallis (Strain of PPL ft) 10 lays embryo of NA to the clone_lib:RIKEN full-length enriched mouse cDNA library
                                                                              (Strain Cerpt FT) 12 lays embryo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Carminell Fland Harachicakiy
indherffichency full-length cDNA clening
Morth Length 2003, 14-44 (1949)
99279353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AK011246.1 GI:12847243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HTC: CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               clone:2600017M22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  752 Aspella 753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AK011246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20499374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 722 GAIGAA 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11075851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MY LY ACIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDALINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESS: N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          METOLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOHN NAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTENS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMESTIC NAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOTTRNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KIELKENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AKU11246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TENER T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11 FLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1111E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hodan's
                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                 43
```

```
Sailo, T., Okazaki, Y., Gojobori, T., Bono, H., Kasukawa, T., Sailto, R., Kadota, K., Matsuda, H., Ashburner, M., Batalov, S., Casavant, T., Fleischmann, W.; Gasterland, T., Gissi, C., King, B., Nochiwa, H., Kuchi, P., Lowis, S., Matsuv, Y., Nikaiabil, P., Boro, G., G., Wahlo, T., Saruki, R., Tomita, M., Wanner, L., Washio, T., Sakai, K., Okido, T., Furuno, M., Aono, H., Baldarelli, R., Barsh, G., Blake, J., Boitelli, D., Roimqa, N., Carninci, P., de Boraldo, M. F., Brownstein, M. J., Bull, C., Fletcher, C., Fujita, M., Gariboldi, M., Gustincich, S., Hill, D., Hofmann, M., Hume, D.A., Kamiya, M., Lec, N. H., Lyons, P., Nordone, P., Ping, B., Fingwald, M., Podriquez, I., Sakamoto, N., Sasaki, H., Sahna, J., Mazzarelli, J., Mombaetts, P., Nordone, P., Ping, B., Fingwald, M., Podriquez, I., Sakamoto, N., Sasaki, H., Toyo-oka, K., Wang, K.H., Weitz, C., Whittaker, C., Wilming, L., Wynshaw Boils, A., Yoshida, K., Hassugawa, Y., Nawaji, H., Kohtsuki, S., Bungari, M., Maraki, M., Maraki, M., Mawaji, H., Kohtsuki, S., Bungari, M., Maraki, M., Maraki, M., Makai, M., Maka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ouackenbush, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S.Emittel ([orkTL.2007) Noskilide Hayashizaki, The Institute of Physical and Chemnical Pessarch (PTKEN). Laboratory for Genome Exploration Research (Croup, RIKEN) Genomic Sciences Center (CSC), RIKEN Yokohama Institute, 1 7.22 Suchiro Abu, Tsurimiter, CSC), Ashasyawa 280 0062, Japan (Brailligenome resident and Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrimiter, Terrim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="RIKEN full-length enriched mouse cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA [[braij was plepated and sequenced in Newse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to prepare mouse tissues. First strand cDNA was primed with a primer [5, GAGAGAGAGAGCTCTTTTTTTTTTTTTTVN 3/], cDNA was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Adachi J., Alzawa, K., Akahira, S., Akimura, T., Aono, H., Arai, A., Arakwa, T., Baldarelli, R., Bono, H., Brownstein, M., Bult, C., Carninci, P., Fukuda, S., Fukudishi, Y., Furuno, M., Hanaqaki, T., Hara, A., Hayatsu, N., Hill, D., Hiramoto, K., Hiracka, T., Hori, F., Hume, D., Imotani, K., Ishi, Y., Itok, M., Izawa, M., Kasukawa, T., Kato, H., Kawai, J., Kojima, Y., Konno, H., Koya, S., Kurihara, C., Matsuyama, T., Miyaraki, A., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Okazaki, Y., Ohno, M., Capaki, Y., Capaki, Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Floads visit out web site (intp., genome growthen \tau )by) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sailo, H., Sailo, F., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Schrimt, L., Shibata, K., Shibata, Y., Shinaqawa, A., Shiraki, T., Soqabo, Y., Suruki, H., Tajami, W., Taqama, A., Takahashi, E., Tanaka, T., Tejima, Y., Toya, T., Yammanaka, I., Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Functional annotation of a full-length mouse cDNA collection
Nature 409 (6821), 685-690 (2001)
21085660
```

```
1.00008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                         90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       90
                               ò
                                                            3
                                                                                                                        43
                                                                                                                                                         δŏ
                                                                                                                                                                                     g
                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                        DLOEMPETETELOKSTETSVYKFFDLJ.KETDTSTKVONAMSKLJ.KKYNVIJATJSKLE
RICELITIJOPSSALSTETISMLVIKTSMTTFIJAKGEVIOMEDDLVISFOLMLCVVD
                                                                                         A ranglation - "MPPKAPPPAAAAFPPPPPPPPPPPPPPAQDSOPEELPLAPLFFF
                                                                                                      ETERPETAL OQKLKVPDHVRERAWLTWEKVSSVDG11.EGYIQKKKELWG1C1F1AAV
                                                                                                                                                     YETKESPPALLIGGYKTAALPTNGSPRIPRRQONRSARTAKOLENDYRTTEVIJGKEHE
CHIDEVKNVYFKNFIPETNSIJTVSSNJLPEVESLSKRYEEVYLKNKOLDARUFLDHD
                                                                                                                                                                                   KTLQTDP IDSFETERTPRKNNPDEEANVYTPHTPVRTVMNTTQQLMVILNSASDQPSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                      151 ATGCCGCCCAAAGCCCCGCGCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 3 A ATCHOCATCITIATEGGAGGAGTTGATCIAGATGAGATGCCATTGACTTTACTGAGCTA 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   414 TGTCAAAAGTTAAAGGTACCCGATCATGTCAGAGAAAAGGCTTGGCTAACTTGGGAAAAA 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 553 AGTAPPAGGTTGATAATGCTATGTGAGGACTATTGAAGAGTATAATGTGTTATGTGG 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ...-- 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7.3. GCTAAAGGAGAAGTATTACAGATGGAAGGTGACTGATCTCATTTCAGCTAATGTTG 792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09
                                                                                                                                                                                                                                                                                                                                                                                                                        1 MeteroProLySThrProArgLySThrAlaAlaThrAlaAlaAlaAlaAlaAlaGluPro 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21 ProAlaProProProProProProGluGluAspProGluGlnAspSerGlyProGlu 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41 AspteuProLeuValArqLeuGluPheGluGluThrGluGluProAspPheThrAlaLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 CysGlnLysLenLysTleProAspHisValArqGluArqAlaTrpLeuThrTrpGluLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  493 CAGAAAAGCATAGAAAGCAGIGICIAIAAATIGIITGACITAITAAAAGAAATGGATAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         673 TTATCTACTGAAATAAATTCTAGTGGTAAAAATTTCTTGGATCACTTTTTACTA
                                                                                                                                                                                                                  1 others
                                                                                                                                                                                                                                                                                                               Conservative;
                                                                                                                                                                                                                                                                                                                            Mismatches:
                                                                                                                                                                                                                  346 ₹
                                                                                                                                                                                                                                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                                              Indels
                                          /protein_id-"HAB27493.1"
                                                                          /db_xre1 "MGD:MGI:97874"
                                                                                                                                                                                                                                                                                                                                                                                         US 09 026 459A 45 (1-797) x AK011246 (1 1364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        101 IleCysIlePhelleAlaAlaValAspLeu
                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                         "G1:12847244"
                                                                                                                                                                                                               £07 g
             retinoblastoma l"
                                                                                                                                                                                                    NLISYFNNCTVNP"
                               Zeodon start-
                                                                                                                                                                                                                                                                               1.696 111
                                                                                                                                                                                                                                                                                           1244.50
63.418
59.518
                                                                                                                                                                                                                      3 GO$
                                                                                                                                                                                                                                                                                                                                        $4.77
                                                            /db xret
part at 150
                                                                                                                                                                                                                                                                                                                              Best Local Similarity:
                                                                                                                                                                                                                      404
                                                                                                                                                                                                                                                                                                             Percent Similarity
                                                                                                                                                                                                                                                                 Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                  HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NI CEN
                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \tilde{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \hat{\tilde{\Xi}}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
```

```
linear EST 05-FEB 2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGENCOTIFT_6402743 NIH_MGC_72 Home sapiens cDNA clone IMAGE:5528814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota, Metazoa: Chordata; Craniata; Verrebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                  973 CACGAGTGTAATATAGATGAGGTGAAAAATGTTTATTTGAAAAATTTTATCCCTTTTATA 1032
                                                                                                                                                                                                                                                                                                                                                              1092
                                                                                                                                                                                                                                                                                                                                                                                                                           556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        249
                                                                                                                              CDNA Library Preparation: Life lechnologies, Inc. CDNA Library Arrayed by The L.M.A.G.B. Consortium (HLNL.) DNA Sequencing by Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information con before distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
Plate: LLAM12206 row: c column: 07
150 HisGluCysAsnileAspCluVallysAsnVallyrPhelysAsnPhelleProPheMet 169
                                                                                                                                                                                                                                                                                                                 170 AshSerf.cuGlyf.cuVallhrSerAshGlyf.cufroGluValGluAshl.cuSerf.ysArg 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        National Institutes of Health, Mammalian Gene Collection (MGC)
                                            111 ---AlaValifeProffeAsnGlySerProArqThrProArqArqGlyGluAsnArqSer 129
                                                                                                                                                                                                                                                                                                                                         210 LysThrLeuGlinThrAspSerlleAspSerPheGluThrGluArgThrProArglysSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     230 AsnleuAspGluGluValAsnVallieProProPioHisThrProValArqIhrValMetAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             250 ThrileGinGlnLeuMetMetLileLeuAsnSerAlaSerAspGinProSerGluAsnLeu
                                                                                                                                                                                                                                                                                                                                                                                                      190 TyrGluGluIleTyrLeuLysAsnLysAspLeuAspAluArqLeuFhetzeuAspHisAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /lab_host-*DH10B (phage-resistant)*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /t.issue_type-"melanotic melanoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     m K NA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: cqapbs-r*mail.nih.qov
Tissuc Procurement: ATCC/DCID/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  270 HeSerTyrPheAshAshCysThrValAsh 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="IMAGE:5528814"
/clone_lib="NIH_MGC_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   835 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 835)
NIH-MGC http://mge.nci.nih.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               High quality sequence stop: 647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BM453724.1 GI:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
BM454724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TIFLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
```

```
/note-Torgan: skin; Vector: pCMV-SPORT6; Site_1: NotI; Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT. Average insert size 2 kb. Library constructed by life lechnologies."

2:00 c. 137 g. 233 t. 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6.39 GlnTyrAlaSerThrArqProPro---ThrLeuSerProIIeProHisIIe-ProArqSe 657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  419 LeughakacyssbaltsaralleMetsbaserLeuAlaTrpLeuSeraspserProlleu 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       439 PhoAsptoullolystinSortgsAspArgCluGlyProThrAspHistouCluSorAla 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HELLELLE HELLE HEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      459 OvsProLeuAsaLeuProLeuGlnAsaAsnHisThrAlaAlaAspMetTyrLeuSerPro 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              479 ValAruSerProLysLysClysGlySerThrThrArgValAsnSerThrAlaAsnAlaGlu 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        499 ThrGinAlaThrSerAlaPheGinthrClnLysProteutysSerThrSerLeuSorLeu 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             119 PheTyrtystysValTyrArgleuAlaTyrLeuArgleuAsnThrleuCysGluArgleu 538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5.19 AspLeuProHisAlaValGlnGluThrPheLysArqValLeuIleLysGluGluGluTyr 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                248 ACACAAGTAATTTCAGTTTTGAGAGTAAGTGAAATTGAAATGTAGTATTGAGTGTAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5.49 LeuserGluHisProGluLeuGluHisIleIleIrpThrLeuPheGlnHisThrLeuGln 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         448 OCCATATOCAAACTICAACAATATACACCITAAATTCAAAATCATTCTAACACCCATACAAG 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              458 CAGTATGULTOPACCAGGCOPOPOTTACOPTTIGTGAANTAGGTGAGATTTIGTGGAAG 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B GECCGACCATGTGAACATCGAATCATGAGTTGCGTTGCATGGTCTCCCTCACATGTCATCATGACTTTTA 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               657 rProTyrLys---PheProSerSerProLeu---ArqIlePro---GlyGlyAsn
                                                                                                                                                                     1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   :.
::
::
                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
Mismatobes:
                                                                                                                                                                                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         indels:
                                                                                                                                                                                                                                                                                                                                               Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09 026-459A-45 (1-797) x BM453724 (1-835)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         674 - Hefyr HeSerProteutys 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28 IAIAIIIITCAACCCCCIGGAA 809
                                                                                                                                                                                                                                                                                                                                                   2.790-109
                                                                                                                                                                                                                                                                                                                                                                                   1208.00
92 918
91.048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29.15%
                                                                                                                                                                                                                                                                                                                                                                                                                               Percon' Similarity.
Best Local Similarity:
                                                                                                                                                                                                                                                                                                           Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         every Match:
                                                                                                                                                                                                                                                                                                                                               Pred. No.:
                                                                                                                                                                                                                      RIGIN
                                                                                                                                                                              7.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         43
```

5

 \geq 3 ŝ

ŝ

```
Discar EST 05 PER 2002
                                                HM459031 1023 bp mRHA lincar EST 05 FEB 2007
AGPNGOURT_6393544 NIH_MGC_72 Homo sapiens cDNA clone IMAGB:5528037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissua_type="molanotic melanoma"
//lab_host="bhild (phage-resistant)"
//not_best="bhild (phage-resistant)"
//not_best="bhild (phage-resistant)"
//not_best="skin: Vector: pcMV-sHoff); blie=1: Sall; cloned unidirectionally. Primer: Oliqo dT.
//weinqe insert size 2 kb. Librat; constructed by Lile
//rechologies."
// gg 281 t
                                                                                                                                                                                                                                                    Fukinyota: Motanca: Chordata; Craniata; Vertebrata; Euteleostomi:
Mammalia, Eatheria, Primates; Catarrhini, Hominidae; Homo.
1 (bases 1 to 1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA Sequencing by. Agencourt Blossience Corporation Clone distribution: MGC clone distribution information can be found through the I.M.A.S.E. Consortium/LLNE at: Plate TiAM12204 row: 4 molumn 22 Plate TiAM12204 row: 4 molumn 22 High quality sequence stop: 643.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            602 HisalaValGinGluThrPhelysArgValLeutletysGluGluGyrAspSerle 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       622 IleValPheTyrAsnSerValPheMetGlnArqLeuLysThrAsn1leLeuGlnFyrAla 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                122 ATAGITATTCTATAACTCGGTCTTCATGCAGAGCTGAAAACAAATATTTGCAGTATGCT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   642 ScrührArgProProPhrLeuSerProlleProHis (LePtoArqSerProTyrLysPhe 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         242 CCTAGITICACCCTTACGGATTCCTGGAGGGAACATCTATATTTCACCCCTGAAGAGTGGA 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       682 TyriysileSer31431yileuProfhriysMeifhrProAraSorArglleLeu 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 AAAGTGAAGAATATAGACCTTAAATTCAAAAIGAITGTAAGAGGATAQAAGGICTIGGI 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDNA Library Preparation. Life Technologies, Inc. CDNA Library Arrayed by The LMA.S.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           582 LysVallysAsnilcAspLoulysPhelysTlelieValThrAlaTyrLysAspLouPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conscrvative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                      Esall: cgapbs rimail.nih.qov
Tissue Procurement: ATCC/DCID/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /ordanism-"Home sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-026-459A-45 (1-797) x BM450031 (1-1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone_lib="NIH_MGC_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                NIH-MGC http://mgc.uci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref-"taxon:9606"
/clore "IMAGE:5528037"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                 BM450031.1 GI:18499071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.008
100.008
26.818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.5e-99
1111.00
                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1999)
                                                                                                   , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .1023
                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
                                                                                                                           BM450031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                        DEFINITION
                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                           ACCESSION
RESULT 6
BM450031
                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL.
                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  άď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŏ
```

5

Š ÷ 5 3 5 = 5

```
EST 27-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 914)

Maria, M., Hillier, L., Allen, M., Bowles, M., Dictrich, N., Dubuque, T., Geisel, S., Kucaba, T., Lacy, M., Martin, J., Morris, M., Schellenberg, K., Stepfoe, M., Tan, F., Underwood, K., Moore, B., Thetsing, R., Wylie, L., Lennon, G., Sodres, H., Wilson, K. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anoter-Weetor: p1714D-Pac (Pharmacia) with a modified depylither; 1st strand cDNA was prepared from mammary gland tissue from a lactating lemale, and was then primed with a Not I - oliqo(dT) primer. Double-stranded cDNA was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ligated to Eco KI adaptors (Pharmaco), digested with Not and closed into the Not I and Eco KI sites of the modified p1713 vector. Library is normalized. Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
Eukaryota: Mctazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vw54a04.rl Soarwa mammary_qland_NMLMG Mus musculus cluna clone
IMAGE:1247598 5' similar to qb:MI5400 RETINORLASIOMA-ASSOCIATED
PROTEIN (HUMAN); qb:M26391 Mouse retinoblasioma susceptibility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This clone is available royalty tree through LLNL, contact the IMAGE Consortium (into@image.llnl.gov) for further information.
702 ValSerfletlyCluSerPheClyThrSerGluLysPheGlnLysIleAsnGlnMetVal 721
                                                                                                                122 CysAsnSetAspArqValloutysArgSerAlaGluGlySerAsnProProtysProLou 741
                                                                                                                                                                                                                                                                                                        762 GlyGluSerLysFheGluGluGluLysLeuAlaGluMetThrSerThrArqThrArqMet.Gln 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.22 TOTANCAGOGRECOGGETCATCAAAAGAAGTGCTGAAGGAAGCCTCCTAAAACCACTG 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Library is normalized.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Washington University School of MedicineP
Mashington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MG 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      782 LyschniysMetAsnAspSerMetAspThrSerAsnLysGluGluLys 797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       602 AAGCAGAAAATGAATGATGGATAGCTCAAACAAGGAAGAGAA 649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib-"Soares_mammary_qland_NMLMG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28ml froy 2 El from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /sex-"lemale (lactating)"
/lissue type-"mammary gland"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1996)
Contact: Marra M/Mouse EST Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /ordanism "Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: mouseest watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein (MoUSE);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               High quality sequence stop: 422.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      914 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zdb_vrot "ravon-lunqu"
Zelone-"IMAGE:1247598"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /lab_host - "DH10H"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AA763411
AA763411.1 GI:2813158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               314 286, 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            414 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seq primer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MC1:661286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA76.14]]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOUPOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA76.341170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESS FOR VERS FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KELEKEN, E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHAMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           X. 211 X. X
```

```
was constructed by Bento Soares and M. Fatima Bonaldo.
178 c. 217 q. 261 t. Lothers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         205 PhoLeuAspHisAspLysThrLeuGlnThrAspSerTleAspSerPheGluThr9HnArg 224
                                                                                                                                                                                                                                                                                             914 TITITGGATCCAGAATAAACCCTCGAGCTGT - TCCT111AGGCCTTTTTAAAGCGGGAG 857
                                                                                                                                                                                                                                                                                                                                                                                                           245 ArgThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnserAlaserAspulln 264
                                                                                                                                                                                                                                                                                                                                                                                                                                               797 TOGGCTGTTTTGGAACCTATCCAACAATTTATTCTGALTTTAAACTCCCCAALGACCGC 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          737 CCCTCAGAAINTCTGTI-TCCCTCTCTAAIATTGCGCCGGGTAACCCCAAAAANTTCCC 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      005 GleGLyCysValGluIleGlySerGleArqTyrLyGLeuGlyValArqLeuTyrTyrArq 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      £03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ¥ 3 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          885 TrplleLeuAsnValLeuAsnLeuIysAlaFheAspFhoTyrLysVallledluSerPhe 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 +7+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 405 HetysAlaGluGlyAsnLeufhrArgSluMet HetysHisLeutluArafysdluHis 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    445 SerLysAspArqGluGlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuPro 464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      202 TCCAAGGATGGAGAAGGACT ---GATAACTTGAACTGCTTGTCCTCTCAGACTGCCT 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             465 LeuGinAsnAsnHisThrAlaAlaAspMetTytLeuSerProValArqSerProLysLys 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      485 LysGlySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGluAlaThrSerAla 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          145 CTCCAGGGTAACCATACTGCAGCAGATATGTATGTTTGTCGTCTAAGATGTCTCCAAAGAAA 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     225 ThrProArgLysSerAsmLeuAspGluGluValAshVallleProProHisThrProVal
                                                                                                                                                                                                                                                                                                                                                                        856 ACCCCACGGAAAACCACCTTGT-GAAGCGCCAAAACCGGGTTACTCCCCCCACGCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    265 ProSerGlaAsaLeulleSerTyrFbeAsaAsaCyaThrValAsaFradysGlaNerTle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             225 ValMetGluSerMetLeuLysSerGluGluGluArqLeuSerIleGlnAsnPheSerLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    562 CTGATGGAATCCATGCTTAGATCAGAAGAAGAACGTTTGTCCATTCAGAATTTTAGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        345 LeuLeuAsnAspAsnllePheHisMetSerLeuLeuAlaCysAlaLeuGluValValMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          465 AlaThrTyrSerArqSerThrSerGlnAsuLeuAspSerGlyThrAspLeuSerPhePro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             425 ArqlleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             822 ATCAAAGTGGAAGGGAAGTTGACAAGAGAAATGATAAAAAGATTTAGAAAAAATGTGAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   914
234
19
53
                                                                                                                            Conservative;
                                                                                                                                                 Mismatches:
                                                                                                            Matches:
                                                                                                                                                                   Indels:
                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                        US-09-026-459A-45 (1-797) x AA763411 (1-914)
                                                                                        3,47e-94
1056,50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        178 €
                                                                                                                            82.148
75.978
                                                                                                                                                                   25.49%
                                                                                                                                             Best Local Similarity:
               257 a
                                                                                                                            Percent Similarity:
                                                                        Alignment Scores:
                                                                                                                                                                   Query Match:
                 BASE COUNT
                                                                                        Pred. No.:
                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ά
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ç
                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

```
/note—forgan: Drain; Vector: powVSPORT 6; lst strand cDNA was primed with a Not1-olgo(dT) primer. Five prime end enriched, double-stranded cDNA was disested with Not I and cloned into the Not I and Eco RV sites of the pcMVSPORT 6 vector. Library was normalized. Library was constructed by life Technologies. Contact: Form Liang Life Technologies. Contact: Form Liang Life Technologies, adivision of Invitrogen 9800 Medical Center Drive Foreville, Maryland 20850, USA Fax: (1) 301 610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AL563757 LTI_NFLOOT_NFO'4 Homo sapiens cDNA clone CSUDDOOTYA05 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bukaiyota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           244 ValArgThrValMetAsmThrIleGlnGInLwuMetMetileLeuAsmSerAlaSetAsp 263
                                                                                                                                                                                                   301 GTTAGGACTGTTATGAACACIA[CCAACAATIAAIGA]GALTITAAAITCAGGAAGIGAT 360
                                                                                                                                                                                                                                                                                                                                                                                            284 HeteulysArgVallysAspileSlyTyrIlePbeLysGluLysPbeAlaLysAlaVal 303
                                                                                                                                                                                                                                                                                                                                                                                                                                  Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo. 1 (bases 1 to 792) 11. (bases 1 to 792) 11. (bases 1 to 792) 11. (base, J. and Polayes, D. Full. Hough CDN libraries and normalization Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      www.genoscope.cns.ir.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8371 Email : fliangélifetech.com URL :
http://fulllength.invitrogen.com"
i 148 c 117 a 255 t 26 othe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type="meuroblastoma_cells"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genoscope - Centre National de Sequencage
BP 191-91006 EVRY cedex - France
Email: segrefägenoscope ons Ir, Web - www.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism."Homo sapiens"
/db_xref="taxon:9606"
/cione="csGoLoOJYA05"
/rlone=lib="LTI_NFL001_NBC4"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lengt h:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ptime, mRNA sequence.
AL563757
AL563757.1 G1:12913464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1033.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            344 Lys 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601 AAA 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ! Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sonrce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AL563757/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TUNHUUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                  9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Am Klepterspitz 18a D-82152 Martinsried, Germany
This is the 5' sequence of the clone insert.
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DME'). Email s.wiemann4dkfz heideiberg.dc;
sequenced by BMEZ (Biomedical Research Center at the Charite,
Herlin/Germany) Within the CDNA sequencing consertium of the German
                                                                                                                                                                                                                                  EST 14-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Motazea, Cherdata, Craniata, Vertebrata, Euteleostomi; Mammala, Pophinidae, Homon (1984), Homon (1984), Homon (1985), Homon (1985), Homon (1985), Homon (1985), Homon (1985), Homon (1986),                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note "Vector: pTriplEx2, Site_1, SfiIA, Site_2, SfiIB, cDNA-collection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Please contact the RZPD: Ressourcenzentrum, Heubnerweg 6, 14059
Berlin-Charlottenburg, GPHMANY; Email: clone@rzpd de
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       144 SluValLeuCysLysGluHisGluCysAsnIleAspGluValLysAsnValTyrrheLys 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ** AATTITATAGCTITTATGAATTCTCTTGGACTTGTAAATGAACTTCCAGAGGTF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 :84 GluAsmi.euSerlysArqTyrGluGlufleTyrLeuLysAsnLysAspLeuAspAlaArq 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 GAAAATCTTTGTAAACGATACGAAGAAATTTATGTTTAAAAATAAAGATGTAGATGCAAGA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   204 Leuthet.euAspHisAspLysThrLeuCInThrAspScrIleAspScrPheGLuThrGln 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14.4 AsaPhelleProPheMetAsaSerLeuGlyLeuValThrSerAsaGlyLeuProGluVal 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GAAGITCTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTATTTCAAA 60
                                                                                                                                                                                                          ALS99643
DEFF[13] NG92_r1 313 (synanym: hlee2) Home sapiens cDNA clone DEFF[23] ND992 57, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This clone (DKFZp313F092) is available at the RZFD in Berlin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          605
201
0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="DKEZp337092"
/clone_lib="313 (synonym: hloc2)"
/dev_stage "adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           179 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         indels.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US OF 026-459A-45 (1-797) x AL599633 (1-605)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               106 9
                              505 PhedinThrdlnLysProLeuLys 512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /lab_host-"DH10B"
                                                                 25 TICCALACTCAGAAGCCATTGAAA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No sl sequence available.
                                                                                                                                                                                                                                                                                                                                                          AL599633.1 GI:15162921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.63e-92
1037.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           92 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5.028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genome Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hest Loral Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Allqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           XI DS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOUTTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INT. TRY
                                                                                                                                                                                                                                                                                                                           A. Y.ESEL N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEFEVEN: E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTR 4KS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOHNKINAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fred. No.
                                                                                                                                                                                                   VIS-346-4
                                                                                                                                                                                                                                                                                                                                                                                            KEYW-RUS
                                                                                                                                                                 RESILL X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                          VERSIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N. WW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Z ....
                                                                                                                                                                                                                                                                                                                                                                                                                           SMIRCE
                                                                                                                                                                                                                              Lacins
```

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                               111 ALaVall1cProf1cAsnGlyScrProArgThrProArgArgGlyGlnAsnArgScrAla 130
                                                                                                                                                                   785 GUTKTTATACCCATTAATGGTTCACCTCGAACACGCGAGGCGAGGTCAGAACAGGAGTGCA 726
                                                                                                                                                                                                          131 ArgilealatyschieuGluAsnAspThrArgileileGluValtouCystysGluRis 150
                                                                                                                                                                                                                                              7.25 CROWLAGGAAGAAYTAGAAATIGATAGAAGATTATTGAAGTTGTGTGTAAAGAGAT 666
                                                                                                                                                                                                                                                                                    151 GlucysAsnIleAspGluValLySAsnValTyrPheLySAsnPheIleProPheMetAsn 170
                                                                                                                                                                                                                                                                                                      171 SertandlyteuVallfirSerAsndlyteuProöfuValGluAsnieuSerLysArqfyr 190
                                                                                                                                                                                                                                                                                                                                                                                     211 ThiteachithraspserileAspSerPheGluThrGlnArgThrProArgLysSerAsn 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         485 ACTIVITICADAYICALICIMIACAGITITIGAAACAGAGAAAAGGAGGAAAAAAGTAAC 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 231 JanaspelluCluValAsuVallleProProPisThrProValArqThrValMctAsnThr 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    425 CTTSWIGGAGAGGIGAAIGIAAITCCTCCACACTACTCCAGIIAGGAYIGIIIIGGACAYT 866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          251 TreGinGinLenMetileLenAsuSerAlaSerAspGinProSerGluAsnLeuile 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              271 serfyrPheAsnAsnCysThrValAsnProLysGluSerflete.LysArgValLysAsp 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         305 TOYTHITITIACGANTGCACAGIGAATGCAAAAGAAAGTATACTGAAAAGAGTGAAGGAT 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 291 HeetyryrttePhetysGlutysPheAlatysAlaValGlyGluclyGysValGlutle 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41 digserdinarqiyilystendiy ValarqleniyriyrarqvalmetGiusermeti, 330 HILLIHILLIHILLIHILL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               430 eutysseroludludrafenseriledinAsnPhesertysfeufenAsn-AspAsn 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                350 The PhellisMet Sertz-utz-utala (Ysalatz-uGhuyat Val Mertalaf brityr Sertarg 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           125 TELATIONGAGAAGGAGGATTALGOATTGAAAATTTTHGGAGGGLTGFGAATSAGAAGG 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
                Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                          US 09 026 459A 45 (1 797) x ALS63757 (1-792)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BE082846.1 GI:8473151
                                                                                                                                                                                                                                24.938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hollo Sapieus
                Best Local Similarity:
Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          470 Set 470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 ACT +
                                  Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BE082846/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F. MIK S.
                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                 ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ĩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \frac{2}{3}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    £
                                                                                                                                                                                                                                            Ξ
                                                                                                                                                                                                                                                                                                                                                               7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                            \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \stackrel{\sim}{\circ}
```

```
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1. (bases 1 to 694)
Dias Neto,E., Garcia Correa,R., Verjovski Alme,da,S., Briones,M.K.,
Nagai,M.A., da Silva,W. Jr., Zago,M.A., Boidin,S., Costa,F.F.,
Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H.,
Brunstein,A., deoliveira,P.S., Bucher,P., Jongeneel,C.V., of Haro,M.J., Soares,F., Brettani,R.K., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /cloud_lib="Hidda2"
/dev_stage="Adult"
/dev_stage="
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Project. This entry can be seen in the following DRL
(http://www.lodwig.org.br/corripts/actbind2.pl?) atz BC2 BT064z 210
200 914 co64x7-2000 02 3544-1)
Seq primer: pur 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    716 - Ladwig Institute for Cancer Research) profiles into the pGC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This sequence was derived from the FAPESP/LICR Human Cancer Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rua Prof. Antonio Prudente 109, 4 andar, 01509 010, Sao Paulo SP,
                                                                                                                                                                                                                                                                                                                                                Shotgun sequencing of the human transcriptome with oRF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             295 PheLysglatysPheAlatysAlaValGlyGluGlyGysValGluIleGlySerGluArg 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 † ; }
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                497 GAACGATTATCCATTCAAAATTTTAGCAAAGTTCTGAALGAGAAGATTTTTCATALGTCT 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       275 AsnCysThrValAsnProLysGluSerlleLeutlysArqValLysAsplleClytyrlle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Proc. Natl. Acad. Sci. U.S.A. 97 (7), 4491-4496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ludwig Institute for Cancer Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       inde is:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism-"Homo sapiens"
/db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-026-459A-45 (1-797) x BE082846 (1-694)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          High quality sequence start: 58
High quality sequence stop: 669.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: asimpson dudwiq.orq.br
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9.9e-92
1030.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ICL: +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94.958
24.868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96. 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     694
                                                                                                                                                                                                                                                                                                                                                                                            sequence tags
                                                                                                                                                                                                                                                                                                     Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hest Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20202663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Brazil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No.:
                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>م</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ć
```

S

```
linear EST 27-JAN-1998
    olişe d" primine, Size selected by column fractionarium; average insert size 1.08 kb. Primary library, unamplited...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pukaryeta; Wetaroa; Chordata; Craciata; Vertebrata, Batelesstomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   wasubada Saares_mammary_aland NMLMO Mus musculus CIRA clore IMAGE:1247665 5' similar to qb:MISQ Mus musculus CIRA clore IMAGE:1247665 5' similar to qb:MIS400 RETINOBLASTOMA:AsswcIATED FNCHTH (HOWAN), qb:M26391 Mcusc retinobiastoma susceptibility Protein (McUSE); mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             160 ValTyrPheLysAsnPheIleProPheMetAsn-SerLeuGlyLeuValThrSerAsnGl 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    199 plemAspAlaArqLeuPheLeuAspHisAspLysThrLeuGlnThrAspSerileAspSe 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    299 (Alatya) yakaba's 'yakab'yogsya's atkab'yakab'ya ata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        483 IGCIAAAGCTGTGGGACAGGGTTGTGTCGAAATTTGATGACAGGGATACAAACTTGGAGT 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              140 ThrArgllelleGluValLouCystysGluHisGluCysAsmIleAspGluValLysAsm 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         63 GITTATITICAAAATITIATACCTITIAIGGAIIGCICIIGGACTIGIAACAICTAAIGG 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          219 rPheGluThrGlnArqThrFroArqLysSerAsnLeuAspGluGluValAsnValIlePr 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              303 ICCACACACTCCAGIIAGGACIGIIAIGAACACIAICCAACAAITAAIGAIGAIIIIAAA 362
                                                                                                                                                                                                                                                                                                                                                                                                 183 TCIAGAIGCAAGALIALITITGGAICATGATAAAACTCTTCAGACTGATTCTAIACACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      259 nSerAlaSerAspGlnProSerGluAsoLeuIleSerTyrPheAsnAsnCysThrValAs
                                                                            1 others
                                                                                                                                                                                                              Conservative:
Mismatches:
                                                                          186 t.
                                                                                                                                                                                          Matches:
                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                            HS-09-026-459A-45 (1-797) x AW583181 (1-623)
                                                                       109 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA763485.1 GI:2813232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            339 eGlnAsnPheSerLysLeu 345
                                                                                                                                                              2.07e-90
1016.00
98.07%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       603 TCAAAATTTTAGCAAACTT 621
                                                                          93 C
                                                                                                                                                                                                                                 97.10%
24.52%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 house mouse.
                                                                                                                                                                                                                                      Best Local Similarity:
                                                                          234 a
                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA763485/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                       BASE COUNT
                                                                                                                                                                   Pred. No .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VEPSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOUPCE
                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ਜ਼ੋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       l (bases 1 to 623)
Melton,D., Meadows, A., Cliffon,S., Hillier,E., Marra,M., Pape,D.,
Melton,D., Martin,J., Blistain,A., Schwitt,A., Theising,B., Riffer
J.E., Konko,J., Bennett,J., Cardenas,M., Gibbons,M., McGenn,R., Cole
J.K., Isagareishvili,K., Williams,T., Jackson,Y. and Bowers,Y.
Washu-Harvard Papereas ESI Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST 13 MAR 2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Libraries were constructed by Dr. Douglas Melton DNA sequencing tanter DNA sequencing by: Washington University Genome Sequencing Center For information on obtaining a clone please contact; Juliana Brown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Riology, 7 Nivinity Avr. Combridge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This sequence now available from the IMAGE consortium, for clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
Eukaryota, Motaroa, Chordata, Craniata, Vertebrata, Buteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note-"organ: Pancreas: Vector: pSPORT1: Site_1: Not 1; Site_2: Sal 1; Library constructed using SuperScript
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  iallh09.yl Human Pancreatic Islets Homo sapiens CDNA clone
IMANE:5638049 5' similar to qb:MI5400 RETINORLASTOMA-ASSOCIATED
PROTEIN (HUMAN); gb:M26391 M.use retinoblastoma susceptibility
                     415 MetIleLysHisLeuGluArqCysGluHisArgIleMetGluSerLeuAlaTrpLeuSer 434
15 LeuAspSerGlythrAspLeuSerPhoPreIrplleLeuAsnValLeuAsnLeuAssla 394
                                                                                           95 PheAspFheTyrLysVallleGiuSerFhelleLysAluGiuGlyAsnLeuThrArqGlu 414
                                                                                                                455 LeuchuserAlaCysProLeuAsnLeu-ProLeuGlnAsnAsnAsnHisThrAlaAlaAspMe 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plasmid Library kit (life Technologies) cPNA made by
                                                                                                                                                                                                                                                                                                                                                                                                             137 OTTGAATOTGCTTGTCCTCTTAATCTGTCCCCCGGAATAATCACAATGCAGCAGATAT 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           474 tTyrLeuSerProValArqSerProLysLysLysGlySerThrThrArqVal 491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Transt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="!MACE:5638049"
/clone=lib="Human Pancreatic Islets"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="Islets of Langerhans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R.P.NA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                orders confact: infodimage.llnl.gov
Seq primer: -40RP from Gibco
High quality sequence stop: 430.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .623
/organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dmeltonabiohp harvard edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein (MOUSE),, mRNA sequence.
AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 623 MG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xrel-"taxon.9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Endocrine Fancreas Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /lab_host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (brown:fas.harvard.edu)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AW583181.1 GI:7260125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   617-495-1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           617-495-8557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AWSB 4181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOUTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFEREN'E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FESUE 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOHNHAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AWS8 11 H I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEALTHES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUGRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               500001
                                           9
                                                                                                                                                                                                                                                                                                                                                                     ŝ
```

```
ò
                                                                                           9
                                                                                                                                                                                    90
                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                               ä
                                                                                                                                                                                                                                                                                                                                ολ
                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ΟŸ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ΟŽ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               polylinker; Ist strand cDNA was prepared from mammary daland tissue from a lactating from all and the lactation from the North a Nort 1 - 0.190/GLI) primer. Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Nort and Eco RI sites of the modified pilot the Nort I and Eco RI sites of the modified pilot vector. Library is normalized. Library was constructed by Bento Soares and M. Fatima Bonaldo. "
                 1 (bases 1 to 871)
Martalm., Billierl., Allen.M., Bowles.M., Dietrich.N., Dubuque,T.,
Geisel,S., Kucaball., Lacy,M., La.M., Martin.J., Morris.M.,
Schellenberg,K., Stepteck.M., Han.F., Underwood,K., Moore,B.,
Theising,K., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
Mammalia; Eutheria; Rodentia; Sciuroquathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        225 The ProArquystan Ashala a a Aspella CluVal AshVall Celhar CHISTAID COV 244 ,
                                                                                                                                                                                                                                                                                                                                                  Email: mouseest@watson.wustl.edu
This clone is available royalfy-free through LLAN. ; contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note-"Ventor: pT7T4D-Pac (Pharmacia) with a modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IMAGE Consortium (into dimage.llnl.gov) for further information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HED ARCCTANGGAAAACAACCESTEGGAAGGGGCAACGAGTTAACCCCAAAAT 804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   244 alArgThrValMetAshThrIleGlnGlnLeuMetMetIleLeuAshSerAlaSerAspG 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               803 1103 GPG11111GAIACIACIGCACCALIAGGGGGTTTTTAA111GGCCAAGTATCA 745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            264 InProSeroluAsnientleSerTyrPheAsnAsnCysThrValAsnProLysAluSeri 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           744 GEOPALCESAAAATOTTGTTGCCFCCTTCCAIATTGTCCCGTTAGCTCCAAAGAACAATC 685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            284 TetrettysArdVallysAspile(3)yiyrillePhetysClatysPheAlatysAlaValG 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      684 TOTTAGGAGGTTAAAGGIIGIGGGGGAGGGIIIAAAAGAGAGGGIIGTTAAGGGGIGGG 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       404 lyGlnGlyCysValCluffeGlySerGlnArqTyrLysLegGlyValArqLeuTyrTyrA 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   424 rqVa1Met GluSer Met LeuftysSerGluGluGluArqLeuSerfleGluAsnPheSerL 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4444 Forest Park Parkway, Box 8561, St. Louis, MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clour_lib-"Soares_mammary_gland_NMLMC"
/Sex="fondic (lactating)"
/tissouc_type="mammary gland"
/lab host="PHIOB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            216
17
53
5
                                                                                                                                                                                                                                                         Washington University School of MedicineP
                                                                                                                                                                                                                                                                                                                                                                                                                                               Seq primer: .28ml4 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               251 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
                                                                                                                                                                                                          Contact: Marra M/Mouse ESI Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism "Mus musculus"
/db xrel="taxon.10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99 026 459A 45 (1-797) x AA764485 (1 871)
                                                                                                                                                             The WashU HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop: 495.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zelone - "IMAGE: 1247665"
                                                                                                                                                                                                                                Washu HHM1 Mouse ESI Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  204 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6.726 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1013.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               172 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HO, 44%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                74.48%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24.44%
                                                                                                                                                                                         Unpublished (1996)
                                                                                                                                                                                                                                                                                                   414 286 1800
                                                                                                                                                                                                                                                                                                                                Fax: 414 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .871
                                                                                                                                          Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                         MGI:661353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ouery Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOLITOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                      PEFERENTE
                                                                                                                                                                                    JEJIKNAI.
                                              AULHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                             TITLE
                                                                                                                                                                                                          MME'N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NI CIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
```

```
1237 13 FICH 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebruta; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HG283543 922 bp mRNA 155 at EST 13 FISH 24 602364278F1 NIH_MGC_90 Homo sapiens cDNA clone IMAGE:4472611 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 2 4
                                                                                                                                                                                                                                                            265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NIB MGC http://merinci.nib.gov/.
National Institutes of Health. Mammalian Gene Follection (MGT)
Unpublished (1999)
564 GIGIGAFGANAICCAIGCITAAAICAGAAGAAGAACSTIIGECCALICAGAAITTITAGCA 505
                                              384 roftpilleteuAsnVallæuAsnLeuLysAlaPheAspPhetyrttysVallledtuSerr 404
                                                                                                                                                                                                                                                                                                                                104 belletysAlaGluGlyAsnLeuThrArqGluMetlletysHisLeuGluArqCysGluH 424
                                                                                                                                                                                                                                                                                                                                                                                                                             424 isArqIleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeuTleLysG 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            204 AGTCCAAGGALGGAAGAAGGACT---GALAACCTIGAACCTGCTIGTCTTCTCAGCCTGC 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          484 ysLysGlySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGluAlaThrSerA 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA Sequencina by: Incyte Genomics, Inc. Clone distribution intormation can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                364 et.AlaThrTyrSerArqSerThrSerGluAsnLeuAspSerGlyThrAspLeuSerPheP
                                                                                                                                                                                                                                                                                                                                                                            324 TTATCAAAGTGGAAGCCAACTTGAGAAGAAAAGATGATAAAAAGTTTAGAAAGATGTGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                              464 roleuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerProValArqSerProLysL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CONA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                           cDNA Library Preparation: Lite Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib-"NIH MOC_90"
/tissue_type-"adenocarcinoma, cell line"
/lab_host-"DH10B (phage resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            http://image.llnl.gov
Plate: LLAM10293 row. 1 column. 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _____
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /ordanism="Homo_suplens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          High quality sequence stop: 643.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone-"!MAGE:44726]]"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: cgapbs-r@mail.nih.qov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     504 laPheCinThrCinLysProLeulys 512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27 CCTTCCATACTCAGAAGCCATTGAAA z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BG253543.1 GI:12763359
                                                                                                                                                                 (bases 1 to 922)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA sequence.
BG253543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 13
BG253543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1111.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
```

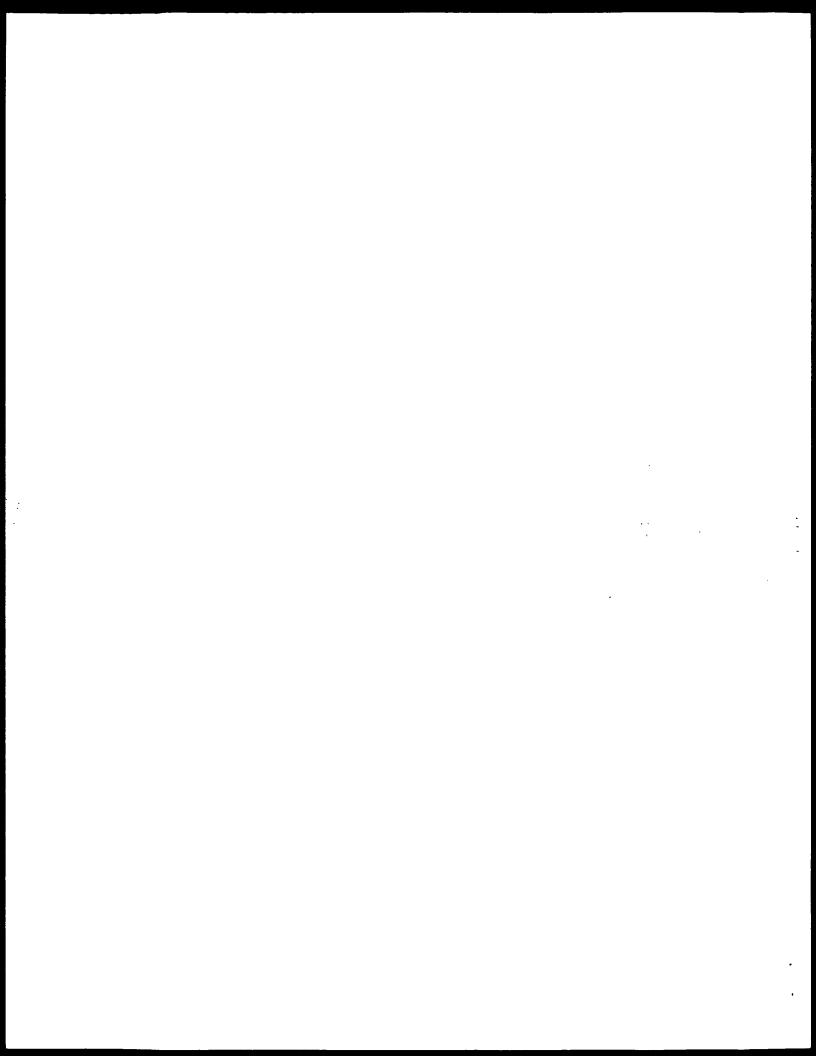
Sao Paulo-SP,

```
//olle="Ordan, head_mesk, Vector, public Site_1: smal; Site_2: Smal; A mini-library was made by clocing products derived from ORESTS PCR (U.S. Letters Patient application No. 196,716 - Ludwig Institute for Cancer Research, profiles into the pCC 18 vector. Reverse transcription of fissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                    This sequence was derived from the PAPESP/LICE Human Canter Genome Project. This entry can be seen in the following URL (HTP, Www likely or the Year in the following URL (HTP, Www likely or the Year in the following URL 181099-023-010864-1)
  čM4-Hjol⊀I-lHlo44-023-610 HT9191 Homo sapiens cDNA. mENA sequence.
                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          183 AAATTCTACTGCAAATGCAGAGACACACCACCTCAGCCTTCCAGACCCAGAGCCATT 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       432 TrpLeuSerAspSerProLeuFheAspLeuIleLys3lnSerLysAspArgGluGlyPro 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      441 | DansorthralaAssaAlaGluThralsAlathrSerAlaFheGluThr31uL, sProLe | 511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         531 uAsnThrLeuCysGluArgLeuLeuSerGluHisProGluLeuGluHisllelleTrplE 551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           511 utysSerThrSerLeuSerLeuPheTyrLysLysValTyrArqLeuAlaTyrLeuArgLe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                         01509-010.
                                                                                                                                                  1 (bases 1 to 588)
HGGP http://www.ludwig.org.br/OPESTES.
The FAPESP/LICR Human Cancer Genome Project.
                                                                                                                                                                                                                                                   Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rud Prof Antonio Prudente lü€, 4 andar,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism-"Homo sapiens"
/db_xref-"taxon:9606"
/clone_lib_"HT0181"
/dcv_stage-"Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1 188)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  High quality sequence stop: 559
                                                                                                                                                                                                                                                                                                                                                                      Email: asimpson@ludwig.org.br
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seq primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US 09 026-459A-45 (1 797) x AW368234
                                                                                                                                                                                                                                 Contact: Simpson A.J.G.
                                      AW358234.1 GI:6872884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1,12e-86
978,00
                                                                                                                                                                                                                                                                                                                           Tel: .55-11-2704922
Fax: .55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97.45%
23.60%
                                                                                                                                                                                                                 Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97.458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .588
                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rest Local Similarity.
Query Match:
                  AW368234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                                                                                                               Brazil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                ORGANISM
    N. I. I. N. I. S. H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                  ACCESSION
                                                                                                                                                      REFERENCE
                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                 JOURNAL.
                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                        VERSION
                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                 COMMENT
                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST 04-FEB-2000
          Site_2: Sull; Gloned unidirectionally, oligo dT primed.
Average insert size 1.7 kF Library Enriched for Intil Length clones and constructed by Life Technologies.
Note: this is a NIH_MGC Library."
Zhofor "Crean Liver Vertor prWV SPORIG, Sito 1 Noti.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                548 HollotrpihriogphoGinHisthriogGinAsnGlu-TyrGluLeuMetArgAspAr 567
                                                                                                                                                                                                                                                                                                                                                                                                                        (67 qHistorAsrolutleMo'MotOrrorMo'TyrolyIleOystysValiysAsrIleAs 587
                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 GCATIG-GACCAAATTATGATGTGTTCCATGTATGCCATATGCAAAGTGAAGATATAGA 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           179 ATTCAAACGIGT-TIGATCAAAGAAGAAGIAISATICTATATAGIATTCTATAACTC 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4.27 rValPheMetGlnArqLeuLysThrAsnIleLeuGlnTyrAlaSerThrArqProProTh 647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         647 rleuSerProTleProHisIleProArqSerProTyrLysPheProSerSerProLeuAr 667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (57 GATTCCTGGAGGGACATCTATATTTCACCCTGAAGAGICCAIAIAAAAIITCAGAAGG 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       767 GinGloLysLeuAlaGluMetThrSerThrArgThrArgMetGloLysGloLysMetAsu 786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  887 yLeuProThrProThrLysMetThrProArgSerArgIleLeuValSerIleOlyGluse 707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               707 rPbbriyThrSordluLysPheGloLysTleAssGlnMe*ValTysAsaSorAspArqVa 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    747 pilecholyserAspoluAlaAsp GlySer5, SHis-LeuProGlyGluSer5, sPhe 766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                      2224
2224
53
23
88
0
                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mKNA
                                                                                                                                                                      Lenath:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       787 AspSerMetAspThrSerAsnLysGluGluLys 797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             716 GGAAGCIGGGTAPPTPPPAPAGGGAAAAAAAA 748
                                                                                                                                                                                                                                                   indels:
                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                         126-459A-45 (1-797) x BG253543 (1-922)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         588 bp
                                                                                                                                                                5.726.89
1004.00
90.518
88.548
24.238
                                                                                                                                                                                                                               Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AW368234
                                                                                                                                                                                                           Serem Similarity:
                                                                                                                                                      Aliqument Scores:
                                                                                                                                                                                                                                                   coery Match:
                                                                                              AASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
AW 666.34
LOCUS
                                                                                                                                                                      Pred. N
                                                                                                                                                                                                                               13.75
                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ā
```

```
B1151968 746 bp mRNA linear EST 05-JUL-2001 602916108F1 NCL_CGAP_LU29 Mus musculus cDNA clone IMAGE.5066737 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Anote—"organ: lung; Vector: pCMV-SPORTS; Site_1: Salt; Site_2: Moff; Cloned unidirectionally. Primer: Oliqo dT. Library constructed by Lite Technologies. Investigator providing samples: Gibbert Smith, NHH".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Manumalia: Eutheria: Rodentia: Seiuroquathi: Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /fissue,type="spontaneous tumor, metastatic to mammary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: eqapbs-r*mail.nih.gov
Tissue Procurement: Gilbort Smith, Ph.D.
FONA Library Frequentien: Lite Technologies, Inc.
CLNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
LNA Sequencian by: Incyte Annuics, Inc.
Clone distributions MGC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                    TELLITTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELlettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellet
591 silelleValThrAlaTyrLysAspleuPioHisAlaVaiGinGluThrPheLysArgVa 611
                                                                                                                                        551 rLeuPheGluffisThrLeuGlnAsuGluTyrGluLeuMetArqAspArqHisLeuAspGl 571
                                                                                                                                                                                                                                                                                                                        571 nileMetMetCysSerMetTyrGlylleCysLysValLysAsnileAspLeuLysPheLy 591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         484 AATGALEGIAAGAGGALAGAAGALGETCCTCALGCFCCGAGGAGALTTGAAAGGFGT 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 611 lleullelysGluGluGluTyrAspSerIleIleValPheTyrAsn 626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plate: LLAMILL79 row: p column: 02
High quality sequence stop: 717.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone="IMAGE:5066737"
/clone_lib="NCI_CGAP_Lu29"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ompublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /ordanism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xrel."taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              l (bases 1 to 736)
NIH MGC http://mac.uci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /strain "CZECH []"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stem ceil origin."
Zab_host="DH10H"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BI151568.1 GI:14611569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                http://image.linl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6,068 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93.81%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              962.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MRNA Sequence.
Bilsisa8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      puery Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DRGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEFFKF.W.T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FOUR NAT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R1151568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  - WME:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
```

```
US U9 U26 459A 45 (1-797) x BI151568 (1-736)
```

```
647 ThriauSerProlleProHisTleProAugSerProTyrtysPheProSerSerProLeu 556
                                                                                                                                                                                                                                                                                                                                                               707 SerPheClyThrSerClalysPheClnLyslleAssClnMctValCysAshScrAspArg 726
                                                                                                                                                                                                                                                                                                                                                                                                                                          607 ThrPheLysArqValLeuIleLysGluGluGluTyrAspSerIleTleValPheTyrAsn 626
                                                                            627 SerValPheMetGlnArqLeuLysThrAsnIleLeuGlnTyrAlaSerThrArqFroPro 646
                                                                                                                                                                                                                                                                                                                                                                                                                        727 ValleuLysArgSerAlaGluGlySerAsnProProLysProLeuLysLysLysLeuArgPhe 746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          767 GinGiniysikualaGiuMetThrSerThrArqThrArqMetGiniysGiniysMetAsm 786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        539_CAACAGAAACTGGCAGAAATGACTTCCACTCGAAAGAAGAATGGAAAAAGGAGAAATGAAT_598
                                                                                                                                                                                                                                                                                                     687 GlyLeuProThrProThrLysMetThrProArgSerArglleLeuValSerlledlyGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  747 AspileGluGlySerAspGluAlaAspGlySerLysHisLeuProGlyGluSerLysPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Search completed: January 19, 2003, 05:07:00
Job time : 1774.3 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      787 AspserMetAspThrSerAsnLysGluGlu 796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  599 GAGAGGARGTCTCAAACAAGGAGGAA 628
                                                                                                                                                                                                                                                                                                                                                                                        qa
•
                               qq
                                                             Ś
                                                                                                                       ò
                                                                                                                                                   QQ
                                                                                                                                                                                 οy
                                                                                                                                                                                                            ď
                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                       2
                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                 김
                                                                                                                                                                                                                                                                                                                                                               :.
O
                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S.
```



Centrole version 5.1.3 Copyright (c) 1993 - 2003 Compugen Ltd.

nucleic search, using trame_plus_p2n model M protein

January 17, 2003, 18:27:24 ; Search time 1882.69 Seconds (Without alignments) 7320.587 Million cell updates/sec

US 09 026 459A 33 Title: Perfect score:

....TPMOPOKANDSMDTSNKEEK 851 1 MPPKTPPKTAATAAAAAEP. Sequence:

HLOSUM62 Scoring table:

Xqapop 10.0 , Xqapext Yqapop 10.0 , Yqapext Fqapop 6.0 , Fqapext Delop 6.0 , Delext

16154066 seqs, 8097743376 residues Searched:

Total number of hits satistying chosen parameters:

Minimum DB seq length: 9 Maximum DB seq length: 2000000000

Post processing: Minimum Match 40% Maximum Match 100% Listing first 45 supmarise

Model from parameters:

Model

batabase :

em_qss_mus:* em_qss_other:* em dss vrt:* em dss_tun:* •ш qss шаш:• em gss_pro:* em gss hum:* • : uld_ssp_m. em gss_inv:* + unitse me *:motse me om_estba:* om estro;* em estin:* 4b_est 2:* qb est4:* qb ost5:* em estmu:* em estov:* em estpl:• qb_est !:* qb hte:* qb_estl:* qb_qss: *:18H

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Result No.	2	Score	Query Match	ngth	DB	c1	ineseription
	: :	1551	. 40	1050			CONTRACTOR OF STREET
	٠.	1470 5		1 9 7	Ì	2010010	
	u :	(. 7 / 1		-		ARO11240	
	v) .	144 X	Υ.	38	♂	80770770	
	4	1339	30	1001	7	BM475603	
	u I	1 5000	æ Si	r- C1	Ġ,	AL597811	ALC37811 DKFZp4140
	9	1236.5	28.5	088	1,4	30.222237 10.222223	BODDEDD7 AGENCOURT
	7	1208		835			BM453724 AGENGOURI
	သ	1111	C4 7,5	1023]	BM4 500 41	BM450031 AGENCOURT
U	5	1056.5	24	914	5	AA763411	
C	C	1043	6.0	362	ç	ALS6, 4757	A: 5,6, 43"
	Ξ	1037	23.7	605	ۍ	AL599633	
บ	2	1030	23	6.94	0	HE087846	AGOURT CON ARKS ROTH
	3	1016	23	623	0	AW583181	AWSHALKI LALLANDA
U	14	1013	٠,	871	œ	AA763485	AA763485 VW54b01 1
	r.	1004	5 62	: : :::::::::::::::::::::::::::::::::	Î	2 P'52 9 C'5H	86 C F 97 C U 9 F F 57 5 C 51
	4	97B	* 00	1 33 1 03 1 07	-	AW 4687.44	HIGH TAN PERSON
	1	0.46	; c		· ~	F 700 M	STRIN SWITTER SOLEMN
	- a	0.00	10		1 -	AV7155.43	011016200 000 1: TU
	2 2	666	7 7		2.5	AV 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	n c		0.170	200	7.5		100H200 000H200
	7 -		5 . E	7.54	7 3	MF144857	RF14485/ 601/9034
	-4 C	0.00		200	, ·	ALC 92790	ACCOUNT DRIZENTAL
	પાડ પાડ	10 c 10 c 10 c		7 () 7 () 7 ()	_; - 1 (877.8	18E: 3778 COICE 35C3
	ก นา	71 U	1.07		٠,	ALI 2094 :	ALLIZO341 DKF2p362D
	ر ا	r :	-:: -:::			7 8 5 9 1 C 1	B1526982 602927177
	r Ci	869.5	ж Э	٠	C 4	BG244088	B3244088 602358151
٠,	-7		_2 *.		. :	B10552346	
C	27		19.3	484	-	BE168095	
	87	833.5	ث	646		BM490416	
	5,2	824	œ	493		AW502887	AWS02887 01-HF-BN0
	30	815.5	ж ж	다. 다.	<u></u>	AA072780	AA022780 mm76405.r
		78:	۲.	~ ⊙ ∷	<u>~</u>	BM4567.8	
	Ç!	751	17.1	45.2		AW503514	AWS04514 UT HF BN0
C	<u>~</u>	189	15.6	438		BF827047	BFB27047 RC3 BN002
	4	681.5	Ś	496	14	C82304	C82404 C82404 Leuk
	£.	680.5		832	ō,	A1646038	A1646038 vw54a10.x
	ş	667		6.51	1 3	BI696841	B1696841 603344967
		659	15.0	380	0	AW951604	AW951604 EST 463674
	38	119		425	10	BE285796	HE285796 601096510
	46	628	14.3	672	7	B1868459	BIB68459 603492440
C		929	14.3	5.21	7	BF466546	BP466536 UL M CG0p
C	4	625.5	14.3		1.7	BF998490	BP998390 CMZ GN016
ئ	42	613	14.0	415	5	A1745644	A1745644 1124b06.x
Ç	4 3	611	13.9	410	15	BF560104	8F560104 UL R A1
٠	4.4	509	13.9	411	z	A1745643	A1745643 1124b05.x
C		0.07	1.5.7		ç		

ALIGNMENIS

RESULT 1 BM561083 LOCUS	BM561083 1051 bp mRNA linear EST 20 FEB 2002
DEFINITION	DEFINITION AGENCOURT_6566133 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:5550905 57, mKNA sequence.
ACCESSION	HM561083
KEYWORDS	EST.
SOURCE	human.
ORGANISM	ORGANISM Homo sapiens
	Eukaryota: Metazoa; Chordata: Craniata; Vertebrata: Euteleostomi;
	Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo,
REFERENCE	l (bases 1 to 1051)
AUTHORS	NIH-MGC http://mac.nci.nih.gov/.
TITLE	National Institutes of Health, Mammalian Gene Collection (MGC)

```
Library constructed by Life
                                                                                                                                                                                                                                                                                                                                                                                                      Frimer: Oligo dT.
                                                                                eDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by. Agencourt Bloscience Corporation Clone distribution: MGC clone distribution can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          456 AlaValGlyGlnGlyCysValGluIleGlySerGlnArgTyrLysLeuGlyValArqLeu 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             455 @1950xFh-1.5(195AshaGluG)?AsulcaTbrAr jGluMetHettysHishkuGluArg 475 (1911) (1111) [1111] [1111] [1111] [1111]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.96 (19)(y3)luSerLysAspAraGluGlyProThrAspHisLeuGluSerAlaCysProLeu 515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  64 TATIACCGAGIAATGGAATCCATGCTTAAATCAGAAGAAGAAGATIATGGATTGAAAAT 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        336 PhosortystoutouasnaspasnilophotisMetSericulouAlaCysAlulouGlu 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      416 ValValMetAlaThrTyrSerArqSerThrSerGlnAsnLeuAspSerGlyThrAspLeu 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    436 SerPheProTrpIleLeuAsnValLeuAsnLeuLysAlaPheAspPheTyrLysValIle 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        804 GAAAGITITATCAAAGCAGAAGCAAACTTGACAAGAGAATGATAAAACATTTAGAAGGA 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                476 CysGluHisArqIleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeu 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.16 AsnicuProLeuGlnAsnAsnHisThrAlaAlaAspMetTrrLeuSerProValArgSer 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /lissue_lype="retinoblastoma"
/lab_host="bHIOB (phage-resistant)"
/reta="retinoblastom" proverse site.
Site_2: Sall, Cloned unidirectionaliy. Prime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 0 hers
Contact: Robert Strausberg, Ph.D.
Email: cyapbs rémail.nih.gov
lissue Procurement: AFCC
cNNA Library Proparation: Life Technologies. Inc.
                                                                                                                                             found through the I.M.A.G.E. Consortium/ILINL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1051
312
6
18
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative.
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                         Average insert size 1.75 kb.
Technologies."
                                                                                                                                                                                     row: m column. 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . 000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                 /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        '26 459A-39 (1-851) x DM561083 (1 1051)
                                                                                                                                                                                                                                                                                                                          /clone_lib-"NIH_MGC_67"
                                                                                                                                                                                                      High quality sequence stop: 737.
                                                                                                                                                                                                                                                                                                     5550905"
                                                                                                                                                                                                                                                                                /db_xrof-"taxon:9606"
                                                                                                                                                                                                                         Location/Qualitiers
1. .1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   197 1
                                                                                                                                                                                                                                                                                                         Zeione "IMAGE:
                                                                                                                                                                http://image.llnl.gev
Plate: LLAM12263 row:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1.9e-150
1551.00
93.26%
91.50%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             35.398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Omery Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Lucal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SASE CHINT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No.:
                                                                                                                                                                                                                             FEATHRES
      · MMENI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KI :IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      e July
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              급
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \frac{1}{3}
```

```
Shibata,K., Itoh,M., Aizawa,K., Nagaoka,S., Sasaki,N., Carninci,P., Konno,H., Akiyuma,J., Nishi,K., Kitsunai,T., Tashiro,H., Itoh,M., Sumi,N., IshilyY., Nakamura,S., Hazama,M., Nishine,I., Harada,A., Yamam-ti,F., Malsumeri,H., Sakaquchi,S., Ikenjami,T., Fashiwaqi,E., Pujiwake,S., Inoue,K., Toqawa,Y., Izawa,M., Ohara,E., Watahiki,M., Ohaza,K., Y., Tshikama,T., Chawa,M., Tanaka,T., Malsumia,S., Ewal,J., Ohazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Haysshizaki,Y. RIKIN integrated sequence analysis (RISA) system--384-format secone fig pipeline with 384 multicapillary sequencer secone 20530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HTC 19-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       нем genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Motazoa, Chordata, Craniata, Vertebrata, Eutereostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus 10 days embryo whole body cDNA, RIKEN IUII-length
enriched library, olono 2600017M22 retinoblastoma 1, full insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Carninci,P., Shibata,Y., Hayatsu,N., Suqahara,Y., Shibata,K.,
Ifoh,M., Konno,H., Okaraki,Y., Maramaism,M. and Bayashizaki,Y.
Normalization and subtraction of cap-trapper selected cDNAs to
prepare full-length coNA libraries for rapid discovery of new g
Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                     616 GluleuMetargaspargHisLeuaspClulleMetMetCysSerMetTyrGly11ecys 635 [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [1111] [
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            544 CCAAAGAAAAAGGIIFAAAFIAAGAGTGTAATTETAFTGCAAAFGCAGAGAAGA 603
                                                                                                                                                                                         604 ACTIONACTIONAGECASAGECAITSAAAIETAETAETETETETETATATAA 663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             596 HisProGlubeuGluHisIleileTrpThrbeuPheGluHisThrbeuGlnAsnGluTyr 615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           904 TCATGCTGNTCAGGAGACATICAAAGGTGTGTTIGAIGCAAGAGAGAGGGTAIGAIGC 963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      964 IAIAIAANAIIGHIAHAANTGAAANTIINAIANAAAAAGISAAAAAAAIA 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PheTyrAsuSerValFheMetGlnArgLeutysThrAsnile 691
ProLysLysLysGlySerThrThrArgValAsnSerTnrAlaAsnAlaGluThrGlnAla
                                                                                                                                                                                                                                                                                                                                                                                        576 LysValTyrArgLeuAlaTyrLeuArgLeuAsnThrLeuCysGluArglanLauSerGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDNA to mENA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus muscritus (strain:157BL/61) 10 days embryo cDNA to m
clone_lib:PIKEN full-length enriched mouse cDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         High efficiency full-length oDNA cloning Meth. Enzymol. 303, 19-44 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1364 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Carninci, P. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalia; Eutheria, Rodentia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AK011246.1 C1:12847243
HTC; CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          clone:2600017M22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                675 Helleval
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AK011246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   39279253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20499374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDICINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AK011246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H. MILLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ć
```

```
YETKESEPALLIGEPYKTAALPINGSPKI PRKÓUNSAKTAKOLENDIKTEUEVLYKEHE
CHITEEVENVYFENETFETING (1925-N°) PEVESI SEPYELEVYLKIKOLDAKLELOHD
KTLOTIGTIGSPETTEKTEKRINDGEAKVVITPHTIVKEVMITTOOLAVITANSASDOFSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEDEMPETETELOKS LETSVYKFEFDEREFEDESTKVI NAMSKLEAAR INVE ALYSALE
KTCELTYLTORSSALSTEINSMLYLKTSWITFLLAKGEVLOMEIDDLY ISBOLMLOVO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ETEEPEFTALCOKLKVFDFVKERAWLIWENVSSVIGTLEGY IQKKKELWGTCFFTAAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /translation-"MPPKAPKRAAAAEPPPPPPPPPPKEDDPAQDSGPEDDARLEFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    193 (0.9. AVG OPEN PROPERTY OF THE THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                253 GAGCTGCCCCTGGCCTGGGCTTGAAGATTGAAGTGGAAGAACCGGAATTTALLGCAATTA 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        373 STITTCATCCGISSALGGAATCCIGSAAGGAIAIALFCAAAAGAAAGAAGAA FCIGSGCC 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    433 ATCTGCATCTTTATCGCAGGAGTIGATCTAGAGAGAGGCATTGACTTTTAGTGAGCTA 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  193 CAGAAAAGCATAGAAAACAGTGTCTATAAATTCTTTGACTTATTAAAAGAAATCGATACC 552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    553 AGTACCAAGGTTGATAATGCTAAGACTATTGAAGAGTATAAATGTGTGTTATGTGCA 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      84 LouPheSerLysLouGluArqThrCysGluLeuIleTyrLeuThrGlnProSerSer 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 124 AlalysciyCinvaliouGinMetGluAspAsplœuvalileserPheGlidouMetlen 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              44 GlnLysAsnfleGluIleSetValHisLysPhePheAsnLeuLeuLysGlufleAspThr 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64 SerThriysValAspAsnAlaMetSerArgLeuLeuLysLysTyrAspValLeuPheAla 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MetProProLysThrProArqLysThrAlaAlaThrAlaAlaAlaAlaAlaAlaAlaAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11 * TOTCANANDITANANGUTATOTGANTOTATOTTALADANANANGUTU GESTANGUT GEGANANA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Znote-"data source:MGD, source key:MG1:97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 of hers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    151 ATGCCGCCCAAAGCCCCCGCACA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    146, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21 ProAlaProProProProProProGlu.....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /profein_id "BAB27493.1"
/3b xref "GT-10842044"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xret "GI:12847244"
/db_xret-"MGD:MGI:97874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-026-459A-39 (1-851) x AK011246 (1 1364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (3dps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             407 q
                                                                                                                                                                                                                                                                                                                                                                                                   retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUTSYFNNCTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /codon_start-]
                                                                                                                                                                                                                                                                  evidence: ISS
                                                                          > 3 364
             /dene-"Rb1"
                                                                                                                                 /qene-"Rbl"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1472.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        71.22%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          76.348
                                                                                                                                                                                                                                                                                                                                             putative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Land Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30 ----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RASE COUNT
                                                                          CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;;
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     يَّ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Anakawa, T., Baldarelli, R., Bono, H., Brownstein, M., Bult, C., Carninci, P., Fukuda, S., Fukunishi, Y., Furuno, M., Bult, C., Carninci, P., Fukuda, S., Fukunishi, Y., Furuno, M., Hanagaki, T., Haraka, N., Hayasa, N., Hill, D., Hiramoto, K., Hiraoka, T., Hori, F., Hume, D., Imorani, K., 18hi, Y., Itoh, M., Izawa, M., Kasukawa, T., Kato, H., Rawai, J., Korino, H., Koda, M., Koya, S., Kurihara, C., Mansuyama, T., Miyazaki, A., Nishi, K., Nomura, K., Numazaki, R., Ohio, M., Okida, T., Owa, C., Queckenbush, J., Saito, H., Saito, R., Sakai, C., Sakai, K., Sano, H., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Sorhim, L., Shibata, K., Shinaqawa, A., Shiraki, T., Yanaka, T., Tanaka, F., Tejhma, Y., Toya, I., Yamamura, T., Yamamaka, I., Yamamura, T., Yamamaka, I., Yamamika, I., Yamamura, M., and Hayashi, Z., Roshino, M., Muramatsu, M., and Dirawa, C., A., Sano, M., Sano,
                                                                                 Arakawa, J., Shinadawa, A., Shihata, K., Yoshino, M., Itoh, M., Ishii, Y., Arakawa, T., Hara, A., Eukunishi, Y., Konno, H., Adachi, J., Fukuda, S., Arakawa, T., Hara, A., Eukunishi, Y., Konno, H., Adachi, J., Fukuda, S., Saito, I., Gayarak, W., Cajokori, I., Reno, H., Kondo, S., Yamanaka, I., Saito, I., Gyarak, K., Katayawa, I., Saito, E., Kadota, K., Matsuda, H., Ashanner, M., Batalov, S., Casavant, P., Fleischmann, W., Gasterland, I., Gissi, C., Kinq, B., Kochiwa, H., Kuchi, P., Lowis, S., Matsud, I., Gissi, C., Kinq, B., Kochiwa, H., Kuchi, P., Lowis, S., Matsud, I., Nashio, I., Percula, G., Nashio, I., Percula, G., Hond, B., Matherili, R., Sakai, K., Okido, T., Furuno, M., Aono, B., Batdarer, C., Wellin, J., Mashio, T., Brownstein, M., Hung, D., Cirninei, P., de Ronaldo, M. E., Brownstein, M., Hung, D., Matchionni, L., Mashima, J., Mazzarelli, J., Mombaerts, F., Nordone, P., Ring, B., Klunwald, M., Rodridanez, I., Sakamada, N., Sasaki, H., Satorok, R., Wann, Rodridanez, I., Sakamada, N., Sasaki, H., Satorok, K., Wann, K.H., Weitz, C., Whittaker, C., Willming, I., Wannaka, J., Mazzarelli, J., Wannaka, J., Mazzarelli, J., Wannaka, K., Wann, K.H., Weitz, C., Whittaker, C., Willming, I., Wannaka, J., Mazzarelli, J., Wannaka,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                prepare mouse tissues. First strand chwa was primed with a primer by chankarahada revaced contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of the contribution of 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib="RIKEN full-length enriched mouse cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (10.301-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (REEN), Laboratory for Genome Exploration Research Group, REEN Genome Sciences Center (GSC), REEN Yokolama Institute: 1-7-22 Subhiro-cho, Tsurumi-ku, Yokohama, Kanaqawa 240 0045, Japan (E-mail:qenome-reseasc.riken.qo.jp, UKL:http://desemo.as..riken.qo.jp,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Please visit our web site (http://genome.gsc.riken.go.jp/) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Functional annotation of a full length mouse cDNA collection
Nature 409 (6821), 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          con library was prepared and sequenced in Mouse Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db xret-"FANIOM DB:2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /dev stage="10 days embrye"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xret="MGD:MG1:1905260"
/db_xret="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Mus musculus"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local ion/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone-"2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fax:81 45 503 9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . 1 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOLK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21085660
11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1217851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a. Thos
THE REAL PROPERTY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    011.11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOH JENAL.
                                                             FEFERENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HURMHUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZIWW
```

Ç

?

○

Š ŝ 3

ŝ

3.

ŝ

```
/tissue_type "embryonal carcinoma, cell line"
//lab.host"DH10H (phage-resistant)"
//note-"Organ: testis; Vector. pcMV-SPORT6; Site_1: Not1:
Site_2: Sali; Cloned unidirectionally; oliqo-dT primed.
Average issert size 2.5 kb. Library enriched for
full-length clones and constructed by Life Technologies.
Note: this is a NHE-MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  131 MetGluAspAspLeuVallleSerPheGluLeuMetLeuCysValLeuAspTyrPhelle 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       191 GluAsnAspThrArgileileGluValLeuCysLysGluHisGluCysAsnIleAspGlu 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              231 SerAsnGlyLouProGlaValGluAsnLeuSerLysArqTyrGluGluIleTyrLeuLys 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           291 ValileProProHisThrProValArqThrValMetAsnThrileGlnGlnLeuMet.Met 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        613 ANASTISAATIONAAAGAAAGAAGTATISAAAGGAGTICAAGGAATATAGGGATAGATTITAAA 662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 - AAACTOTOTOTOTOTOTASIISCICAAASAACCAIATAAAAGGGGGGTATAIACCCAIIAAT 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  171 GlySerProArgThrProArgArgGlyGlnAsnArgSerAlaArgIleAlaLySGlnLew 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              243 GTGAAAAATGTTATTTCAAAAATTTTATACCTTTTATGAATTCTCTTGGACTTGTAACA 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 303 TCTAATGGACTTCCAGAGGTTGAAAATGTTTGTAAAGGATAGGAAAAATTAATGTTAAA 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       251 AsnLysAspLeuAspAlaArgLeuFheLeuAspHisAspLysThrLeuGlnThrAspSer 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              271 HeAspSerPheGluThrClnArgThrPreArgLysSerAsnLeuAspGluGluValAsn 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          483 GLAATHOLOADAGAGOOGOOGTAGGACTGTTALGAACACTATCCAACATIAALGATG 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                371 LeuGlyValArgLeuTyrTyrArqValMetGluSerMetLeuLysSerGluGluGluAra 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE HITTELLITE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels:
                                                                 /clone_lib="NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US 09-026-459A-39 (1 851) x BQ220275 (1-881)
/db_arel="taxon:9606"
/clone "IMAGE:6044522"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7.53e-140
:448.30
98.30*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97.968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    33.04%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                   313 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ολ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .<u>....</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ż
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ج
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ė
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         긤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BQ220275
ACHWONNEL_7572621 HIH_MSC_92 Home suptens china IMACH.6644522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryvia: Metazoa: Chordata, Graniata, Veitebrata; Euteleostomi:
Mammalia: Eutheria: Primates; Catarrhini; Hominidae: Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1893 TATGAAGAAGTITATCITAAAAAQAAAGATITAAGATGCAAGAGTGITITGGATGAGAT 1152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            224 AsnSerLeuGlytevValThrSerAsnGlyLeuProClyValGlyAsnLeySarLysArg 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              304 ThrileGlnGlnLeumerMetIleLeuAsnSerAlaSerAspGlnProSerGluAsnLeu 323
                                                                                                                                                                                                                                                                                                                                                                            244 TyriloNatleTyrLeuLysAsfLysAsfLuAsfAlaArgLeuThcLeuAsfHisAsp 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        264 (ystbr) and hithraspsartlaaspsarbhadinfhrolnaigithipiaarg (yssar 283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  284 AsnLeuAspGluGluValAsnValll=ProProHisThrProValArgThrValMetAsn 303
                             2.3. BUTAAAGUANAABITATTACABATGAAAATGAGTGGTAATGTCATITCAGCTAATGTG 792
                                                                                                      !44 /ysvall.cuAsplyrPhellelysl.cuScrProProMetLeuLeuLysCluProTyrLys 163
                                                                                                                                                                    293 IGTGTAGTIGACTATITIATIAAGITCICACCTGCTGCTGCTACICAGAGAGGCCATAGAAA 852
                                                                                                                                                                                                                                         164 ThrAlaValileProffleAsnelySerProArgThrProArgArgAlyGlnAsnArgSer 183
                                                                                                                                                                                                                                                                          00.1 #FSCIOCYSASH CASPG19VallySAShValTyrrhelySAShPhelleProPheMet. 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA Sequenting by: Agencourt Bioscience Corporation Clone distribution May show distribution information can be tound through the I.M.A.G.E. Consortium/LLNL at:
Plate: LLAM13287 row: e column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mational institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cgapbs.r=mua.com...
Tissue Procurement. ATCC
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         324 [[eSor]vrPhoAsnAsnCys]hrValAsn 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 881)
NIH-Mil http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stop: 690.
Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BU220275 1 GT-20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SULFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MALE MILET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 3
HQZŽUZ75
Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FULFNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSI: N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1117.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        : MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
```

```
EST 14 AUG 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST (Poustka, A., Wellenreuther, R., Mewes, H.W., Weil, B. and Wlemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ponstka, A., Wellenreuther, K., Mewes, H.W., Weil, H. and Wiemann, S.).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryola, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo,
                                                                                                                                                                   197 eGluValLescysLystlystlyHistlyCysAsn13eAsptlysAsnValLysAsnVallyHitti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              217 sAsaEhelleFrokbeMetAsasez LewijykewVallhraerAsadiylasatroxinda 237 FILLEFEREETHELLEFEREETHIJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        177 qargGlyGlnAsnArqSetAlaArglleAlatysGlnLeuGluAsnAsp1hrArqfle11 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        578 TGAAAATCTTTCTAAAGGATACGAAGAAATTTATCTTAAAAATAAAGATCTAGATGCAAG 637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          297 OVATATGTThTVATMETASNThTTTGCINGINGUMETMETTGTGTATASSETAS 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           758 AGTTAGGACTGTTATGAACACTATCCAACAATTAATGATGATTTTAAATTCAGCAAGTGA 817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  317 pGlnProSerGluAsnLeuIle-SerTyr-PheAsnAsnCysThrVal-AsnProLysGl 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          878 AAAGCTATACCGGAAAAGAAGCGTAAGGAATATAGGAATAACCTCCTTTTAAAGAAAAAA 947
                                                               117 rTrplieThrPheLeuLeuLeuAlaLysGlyGluValLeuGlnMetGluAspAspLeuVall1 137
                                                                                                      218 TIGGATCACATITITATIAGCIAAAGGGGAAGIAITACAAATGGAAGATGTACTGGATCIACTGAT 277
                                                                                                                                                                                                                                                                                                                                                                                                                                         458 TGAAGTICICTGTAAAGAACATGAATGTAATATAGATGGGGAAAAATGTTIALTFFAA 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        518 AAATTTATACCTTTTATGAATTCTTGGACTTGTAACATCTAAGGACTTCCAGAAGT 577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  257 qLeuPheLeuAspHisAspLysThrLeuGlnThrAspSeilleAspSeiPheGluThrGl 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                277 nAtqThiProArqLysSerAsnLeuAspkilukluValAsnValIleProProHisThrPr 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         727 bp mRNA time as including the clone neighbor block) Homo Sapietos clona clone
  137 eSerPheGlnLeuMetLeuCysValLeuAspTyrPheIleLysLeuSerProGroMetLe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 237 IGIUASBLEBSCELYSAFGTYFGTUGTBFFFFFFBBFBSASBLEBASPLEBAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   336 uSerIleLeuLysArg.. ---ValLysAspileClyTyrIle. --PheLysCluLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DKFZp31300816_r1 313 (synchymith) DKFZp31300816 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALS97811
ALS97811.1 GI:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    353 -- PheAlaLysAlaValGly 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           938 TTCTGGCTAAAAGCCTGGGG 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Poustka A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A1.597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ћитат.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Northwilled (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOOS
                                                                                                                                                                                       q:
                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                               ò
                                                                                                      qd
                                                                                                                                                                                                                                ô
                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ÷.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
                                                                                                                                                                                                                                                  RM475603
AGENCOÜKT 5480007 NIH_MGC_92 Homo sapiens cDNA clone IMAGE:5575683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue_type="embryonal carcinoma, cell line"
//dab host="DHIOB (phage-resistant)"
//dab host="Ordan: testis: Vector: pcMV-SPORT6: Site_1: Not1:
Site_2. Sall: clound unidirectionally; cliqo-dT primed.
Average idsert size 2.5 kb. Library enriched for full length clones and constructed by Life Technologies.
Note: this is a NIH_MOC_Library."
                                                                                                                                                                                                                                                                                                                                                                                                               Enkaryoja: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi;
Mammalia: Eutheria: Primates: Catarrhini; Hominidae: Homo.
1 (bases 1 to 1001)
                                       cDNA Library Preparation: Lite Technologies, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencial by: Agencourt Bioscience Corporation
Tone distribution: MGC clone distribution information can be round through the L.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                78.4 FLATGCATTCAAAATLITAGCAAACTTCTGAATGACGACATTTTTTTGATATGTGTTTTTT 842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NIH MOST http://mrc.frt.u.b.acs/
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98 FATGA GIALIGITI GCACLET LOAGGAAA ET GGGAAAGGAGAGGEGAACTTATATATT 1-157
97 uThroluProSerSerSerIleSerThroluIleAsnSerAlaLeuValLeuLysValSe 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3B OTCOGNOTANTIGATACONSTACCANANGITGATAATGCTATGCCANAGACTGTTGAAGAG 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        281
10
10
4
                                                                                                                        410 euAlaCysAlabeuGluValValMetAlaThrTyrSer 422
                                                                                                                                             Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plate: LLAM12326 row: 1 column: 04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 288 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US 09 026 459A 39 (1-851) x BM475603 (1 1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1999)
Pontact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence start: 17
High quality sequence stop: 734.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib-"NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xret-"taxon:9606"
/clone-"IMAGE:5575683"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: eqapbs ramail.mih.gov
lissue Procurement: ALCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 186 9
                                                                                                                                                                                                                                                                                                                                HM475603.1 GT:18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.08e 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1349.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9.4. 87%
Go 65%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 178 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30.56%
                                                                                                                                                                                                                                                                                         mRNA Sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1001.
                                                                                                                                                                                                                                                                                                                                                                                                Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 84.9 G
                                                                                                                                                                                                                                                                                                             HM475603
                                                                                                                                                                                                                                                RM475603
                                                                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                        EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Duery Mateh:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOLICE
                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
FOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.
                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                        PESTILL 4
                                                                                                                                                                                                                              RM4 7560 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FLATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N. WW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     X C
                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>:</u>-
                                                                                چَ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \frac{\hat{\Xi}}{\Xi}
```

```
482 AACATCTATATTTCACCCTCAAGAGTCCATA1AAAA11TCAGAAGG1C1GQ7AACAGCA 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80 VallesphealaLoutheSertystenClaapprhreysGlutentiether 99 FillerHillHillHillHillHill
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                    BC555537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                   RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score:
                                                                                                                                                                                                                                                                                                                                                                       SHOOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred.
                                  : ~
CX
                                                                       급
                                                                                                            δ
                                                                                                                                               Dr
                                                                                                                                                                                                                        윤
                                                                                                                                                                                                                                                                                              90
                                                                                                      This is the 5' sequence of the clone insert clone from S. Wiemann, Molecular Genome Analysis, German Cancer Research, Center (DKE2), Enails swiemannibili, Heidelbeit de, sequenced by DKE2 (German Cancer Research Center, Heidelbeit de, Heidelbeit (Aermany) within the CPNA sequencion constitute of the
                                                                                                                                                                                                                No sl sequence available.
This clond (SEET, 3.300910) is available at the EDPD in Berlin.
Please contact the RZPD: Ressourcenzentrum, Houbnerweg 6, 14059
Berlin-Charlottenburg, GERMANY, Email: clonewrzpd.de.
                                                                                                                                                                                                                                                                                                                                                                                                                                           Zester Wester PiripiEx2; Site_1: Stila; Site_2: Sfilt; cona-collection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  106 CouphedInHisThrLeuGlnAsnGluTytGluLouMetArgAspArgHisLouAspGln 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        242 ATCATTGTAACAGCATACAAGGATCTTCCTCATGCTCGGGAGAGACATTCAAACGTGTT 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          666 LeullelysGluGluGluTyrAspSerilelleValPheTyrAsnSerValPheMetGln 685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             686 ArdLeuLysThrAsulleLeuGluTyrAlaSerThrArgProProThrLeuSerProlle 705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     168. LydsorthrsorLeasealeaPheTyrLysLysValTyrArqLeaslaTyrtouArqLea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            085 Asnihil.cuCysGluArgi.cul.cuSerGluHisProGluLeuGluHisllelleTrpThr 605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Max-Planck-Institute for Molecular Genetics
                                                                                                                                                                                                                                                                                                                                                                                     /**:ne_1;} ="*;} {syn*nyd }; sr?}"
/dev_stage="adult"
/!ab_hvsr="pH!OR"
                                                                                        ponstka@mpimg-berlin-dahlem.mpg.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
Mismatches:
                                Ibbestrasse 73, 14195 Berlin, Germany
Tel: +49-30-84131623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                198 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cngth:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                             /organism="Homo_sapiens"
/db_yref="tyven;9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18 (19 (126-459A-39 (1-851) x ALS97811 (1-727)
                                                                                                                                                                                                                                                                                                                                                                   **1566- "PFFFF91300816"
                                                                                                                                                                                                                                                                                              Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                130 q
                                                                                                                                                                                                     derman Genome Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8.71c 120
                                                                   ·45 30 84131128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1254.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99.59%
99.59%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  161
Department Lehrach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28.62%
                                                                                                                                                                                                                                                                                                               .727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Allemant Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                   S01103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
```

```
PQ222227
AJENCORI_JSSC345 NIH_MGL_SL HomU SALIEUS CLNA LLOLE IMAGELOU41064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
Eukaryota; Metazoa: Chordata; Craniata: Vertebrata; Enteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /Liss.e_lyee-"ed.193al carcinoma, cell line"
/lab.host."DH10B (phage-resistant)"
/note-"organ: testis, Vector: pcMv-SPORIG; site_l: Not1:
Site_2: Sall: Cloned unidirectionally; oligo-dl primed.
Average insert size 2.5 kb. Library enriched for
tull:length clones and constructed by Lite Technologies.
Note: this is a NH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Turbases 1 to 880)
NIH MGC bilg Zings not oils govy.
National Institutes of Health, Mammalian Gene Collection (MSC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: cqapbs-r@mail.nih.gov
Tissue Procurement: ATCC
cDNA Library Preparation. Life Technologies, Inc.
CDNA Library Arrayed The I.M.A.G.E. Consortium (LLNL)
DNA Sequenciad py. Actuation the Bioskietice Corporation
Clone distribution: MGC clone distribution Information can be
                           662 GOTGAAGGAAGPAAPOOTTTVOTAAOTTGAAAAAATTAGGGCTTTGATATTGAACACCALCA 721
746 ThrLyoMetThrProArqSerArqIleLeuValSerlledl,GluSerFhedl,ThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               found through the L.M.A.G.E. Consertium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            row: i column: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="IMAGE:6041563"
/clone_lib="NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98-99-925-459A-39 (1 851) x BQ22227 (1-880)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop: 606.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref "tavon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RQDDDDD7.1 G1.D0403627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7.916-118
1236.50
92.88%
90.75%
28.22%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5', mRNA sequence.
BQ22227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LLAM13279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rest Local Similarity:
                                                                                                                                                                                                                                                                                 806 AspGlu 807
                                                                                                                                                                                                                                                                                                                                722 GATGAA 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
```

```
linear EST 05-PEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HM454724 Heart ESE 05-PEH-2002
AGENCOURT, 540-2743 NIH_M3C_72 Homo sapiens conA clone IMAGE:55-28814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Graniata; Vertebrata; Euteleostomi;
                                                                           | 100 Proserses Serifester the GirifoAsisser Afaicouval Louiys Valsoetrepto | 119 | Hilling Hilling | Hilling Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hilling | Hillin
                                                                                                                                                                                                                                                                                 941 FEGGATCATGATAAAACTCTTCAGACTGATTCTATAGACAGTTTTGAAACACAGAGAACA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (iii) Thr Val Met AsuThr HeddingInLeuMet Met HeLeuAsuSerAlaSerAspGln-Pr 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120 ThrPhoLententAnLysGlyGluValLenGlnMetGluAspAspLeuVallleSerPhe 139
                                                                                                                                                                                                                                                                                                                                                                                                   140 GlidenMetLeuCysVallamAspTyrPhelleLysLauSerProProMetLeuLeuLys 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241 GAACCATATAAACAGTIGITATACCATTAATGGTTCACCTCGAAGAGGGGGAGGT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   200 TandystysGluffisGluCysAsnTloAspGluValTysAsnValTyrPhetysAsnPhe 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361 CTCTGTAAASAACATGAATGTAAAAATAGAGGGGGGAAAAAATTTT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   220 HeProPheMet AsnSerTeuGlyLeuValThrSerAsnGlyLeuProGluVa1GluAsn 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421 AFACCITTIATGAALTCICTTGGACTTGTAACATCGAATGGACTTCCAGAGGTTGAAAAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240 LeuserLysArgTyrGluGluIleTyrLeuLysAsnLysAspLeuAspAlaArgLeuPhe 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           269 Janasphisasphysithtaacinthraspscriteaspscribediothrehaargthr 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   280 ProArqLysSerAsmLeuAspGluGluValAsmVallleProProHisThrProValArg 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601 COACGAAAAADTAACCTTGATGAAGGTGAATGTAAFTGCTGCACACACACFFFAGG 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ProLysGluSert 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  · · LysArqValLysAspileGly1yrilePhe-----LysGluLysPhe 353
1 GIALIGITEGRACIA HERAGRAAT EGGAAGGROATGIGAACHIAIATTIGAGAGAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781 ATACHTOGAAAAAAQOGAAATATAAGAFAAATIFF 839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180 GluAsuAruSerAlaArqIleAlaLysGluLeuGluAsuAspThrArqIleIleGluVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 419 oserGluAsni.eutle SerlyrPheAsnAsnOysThrValAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 835)
NIH MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BM454724.1 GI:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Duman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           448 Letteru
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ESE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            J. JUKNAI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IsM4.5-37.24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H.MEGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                Š
                                                                                                                                                       ÷
                                                                                                                                                                                                                                                                                                               -
                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ===
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
```

Email: eqapbs r*mail.nih.qov Fissue Procurement: ATCC/DCTD/DTP

```
//issue_type "melanotic melanoma"
//db_host="UHIOH (phage resistant)"
//note="Ordan: Skin; Vector: pCMV SPORTS; Site 1: Not1;
Site_2: Sall; Cloned unidirectionally. Primer: Oliqo dI.
Average issert size 2 kb. Library constructed by Lile
Technologies."
cDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The L.M.A.G.E. Consortion (LLNL) DNA Sequencing by: Agencourt Horseience Composation Clone distribution. MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              593 LeuserGluhisProGluLeuGluRisHelletrpThateuPheGluHisThateuGlu 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               653 AspteuProHisAlaValGInGluThrPhetysArqValLeuTetysCluCluMuTyr 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           473 LeuGluArqCysGluHisArgIleMetGluSerLeuAlaTrpLeuSerAspSerProLeu 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    493 PheAspLeuIleLysGlnSerLysAspArqGluGlyProThrAspHisLeuGluSerAla 512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            513 CysProLeuAsnLeuProLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerPro 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          488 GGCATATGCAAAGTGAAGAATATAGAGCTTAAATTCAAAATCATTGTAA AG ATACAAG 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               68 TITGATCTIATTAAACAATCAAAGGGCCGGAGAACAACTGATCAATTTOAATCTGT 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8 GTCCGACGATGTGAACATCGAATCATGAATCCCTTGCATGGCTCTCAGATTCACTTTA 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  188 GTAAGATCTCCAAAGAAAAAAGGTTCAACTACGCGTGTAAATTCTACTGCAAATGCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           553 ThrdInAlaThrSerAlaPheGlnThrGlnLysProLeuLysSerThrSerLeuSerTeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   573 PheTyrLysLysValTyrArgLeuAlaTyrLeuArgLeuAssThrLeuCyssluArgLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       613 AsnGluTyrGluLeuMetArqAspArqHisLeuAspGlnIleMetMetCysserMetTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63% GlylleCysLysValLysAssileAspLeuLysPheLyslleIleVulThrAluTyrLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               428 AATGAGTATGAACTCATGAGAGAGAGATTTGGAACAAATTATGALGTGTTTCATGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            243.1
                                                                                                                  http://image.llnl.gov
Plate: LLAM12206 row: e column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                        1, .835
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                         /clone-"IMAGE:5528814"
/clone_lib-"NIH_MGC_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-026-459A-39 (1-851) x BM453724 (1-835)
                                                                                                                                                           High quality sequence stop: 647
                                                                                                                                                                                                                                                      /db_xrel-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                        137 q
                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6.74e - 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1208.00
92.918
91.048
27.578
                                                                                                                                                                                                                                                                                                                                                                                                                                                          210 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                             Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            HASE COUNT
                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ^{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ô
```

```
//issue_lype="melanolic melanoma"
//issue_lype="melanolic melanoma"
//ab host."DH10B (phage-resistant)"
//note "Organ, skin, Vector: pCMV-SPORTE; Site_1: Not1;
Site_2: Sali, Cloned unidirectionally, Primer: Oligo df.
Average insert size 2 kb. Library constructed by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metaroa, Chordata, Craniata, Vortebrata, Esteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo. , 1 (Mases I to 102) in a pov. NIE: Mar Entry furr nei mik gov.
473 AspserilelleValPheTyrAsnserValPheMetGlnArgLeuLysThrAsnIleLeu 692
                      711 rProlyttys---PhoProSerSerProfeu---ArgilePro---61y6;yAsn---- 72b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NIE-WET ELFPETANT OF EITH GOVE
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                lissue Procurement: Arcc/DCTD/DTP connection Library Preparation: Lite Technologies, Inc. connection Managed by The LiM.A.G.E. Consortium (LLNL) DNA Sequencing by Americant Risscience Origoration Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov.connection.22 High quality sequence stop: 643.
                                                                                             693 GlufyrAlaSerThrArgProPro---ThrLeuSerProffeProHisfle-ProArqSe 711
                                                                                                                                       458 CAGIALGOTICCACCAGGCCCCCCTACCCTIGICACCAANIACCICACATITCCICGAAG 727
                                                                                                                                                                                                                                7.28 GOCCITACAAGI FFFCCCTAGI FFCACCCFFFACGGAAFFCCCFFGGGAAGGAAGCAFFCC 787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       636 LysVallysAsmileAspteutysPhetysHefleValThrAlaTyrLysAspteuPro 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 AAAGIGAACAATAAAATTCAAAATCATTGTAACAGCATACAAGGACCTTCCT 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   216
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    281 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-026-459A-39 (1-851) x BM450031 (1-1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "close_lib-"NIH_MGC_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:9606"
/clone="IMAGE:5528037"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: cgapbs-ramail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Loration/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                197 q
                                                                                                                                                                                                                                                                              27 -IleTyrileSerFroLeuLys 733
                                                                                                                                                                                                                                                                                                                             788 LATATITICAACCCCCTGGAA 809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HM450031.1 G1:18499071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.18e-104
1111.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Technologies.
                                                                                                                                                                                                              211 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mBNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25,35%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bost Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HM450031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unery Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scott 00
                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE THNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYW-RDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                  RM4 500 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N 15.1 N
```

+56 HisAlaValGlnGluThrPheLysArgValLeuIleLysGluGluGluTyrAspSerIle 675

```
linear EST 27-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,I.,
Gesel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptoos,M., Ten,F., Underwood,K., Moore,H.,
Theising,H., Wylie,T., Lennon,G., Soares,H., Wilson,R., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Mctazca, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia: Eutheria, Rodentia, Scierognathi, Muridae, Murinae: Mus.
1 (bases 1 to 914)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          vW54a04.rl Soares_mammary_gland_NMLMG Mus musculus cDNA cloue
IMAGE:i247598 5' similar to qb:MI5400 RETINOBEASTOMA-ASSCCIATED
PROTEIN (HUMAN): qb:M26391 Mouse retinoblastoma susceptibility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This clone is available royalty-free through LLML; contact the IMAGE Consortium (info@lmage.llnl.gov) for further information.
                                                                676 HeValPheTyrasnSerValPheMetGlnArgLeuLysThrAsnHeLeuGlnTyrAla 695
                                                                                                                                                        696 SerThrArgProProThrLeuSerProlleProHislleProArgSerProTyrLysPhe 715
                                                                                                                                                                                                                                               122 AIAGIAITCIATAACIGGGICTICAIGCAGAGAGTGAAAAAAAAAIAIII166AGIATGCI 181
                                                                                                                                                                                                    182 PCCACCAGGCCCCTACCTTGTCACCAATACCTCACATTCCTCGAAACCTTACAAGTTT 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             776 CysAsnSerAspArqValLeuLysArgSerAlaGluGlySerAsnProProLysProLeu 795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   796 Tystyst cuargeheaspileCluGlySeraspCluAlaaspClySertysHisLeuPro 815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   482 AAAAAACIAGGCIIIGATAIIGAAGGAICAGAIGAAGCAGAIGGAAGIAAACAICTCCCA 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              816 GlyGluSerLysPheGlnGlnLysLouAlaGluMetThrSerThrArqThrArqMetGln 835
736 Tyrtys:!leSerGluGlyt.cuProThriysMet IhrProArgSerArgIleLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    836 LysGlnLysMetAsnAspSerMetAspThrSerAsnLysGluGluLys 851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WashU-HHMI Mouse EST Project
Washington University School of MedicineP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seq primer: -28ml3 rev2 ET trom Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              914 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein (MOUSE);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop: 422.
                                                                                             AA763411.1 GI:2813158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MG1:661286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA763411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA763411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AA763411/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESS ION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                             qq
                                                                                                                                                           ζ
                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                            ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
```

```
polylinker; 1st strand cbNA was prepared from mammary gland tissue from a lactating female, and was then primed with a Not 1 - oligo(dl) primer. Nouble-stranded cbNA was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ligated to Eco Ki adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco Ki sites of the modified pTT1s vector. Library is normalized. Library was constructed by Bento Soares and M. Fatima Bonaldo."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note: "Vector, pT7T35 Pac (Pharmacia) with a modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               419 AlaThiTyi SerArqSerThrSerGlnAsnLeuAspSerGlyThrAspLeuSerPhePro 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   459 HetysAlaGluGlyAsnLeaThrArqGlaMet.HetySHisLeuGluArqCySGluHis 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HITTITITITITITI

856 APPOPAGIGAAAAPPACPCHIGT GAAGGGGGGGGGGTACTCCCCCCGGGGTT 798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               299 ArqThrValMetAsuThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAspGln 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     797 TOBOTTSTITEGAAGGTATGGAAGATTTATTGTGATTTTAAAGTGGGGGAATGACGGC 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7.47 COSTCAGAAINTOTGIT TOGGTGTGAATATTGGGGGGGGTAACCCCAAAAAAATTCCC 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               339 LeonlysArqValLysAspileGlyTyrilePheLysGluLysPheAluLysAlaValGly 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               459 OlnGlyCysValOluIleOlySerGlaArqTyrLycLycLeuGlyValArqLeuTyrTyrArq 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                622 CCAGGCTGTGTGACCATCGGAGTACAGGGATATAAACTTTGAGTCGGATCGTATTACCGT 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    562 GEGATGGAATCCAFGCTTAGATCAGAAGAAGAAGGTTTGTCCATTCAGAATTTTAGCAAA 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          499 LeuLeuAsnAsnAsnIlePheHisMet.SerLeuLeuAlaCysAlaLeuGluValValMet. 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              439 Trp11eLeuAsnValLeuAsnLeuLysAlaPheAspPheTyrLysVal11eGluSerPhe 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8B2_TESTATESTAANESTACTTAATTTAAAAGCCTTTGATTTTACAAAAGTGATTGAAAGTTTT_323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    259 PhetouAspHisAspLystbrLeuGInTbrAspSerTleAspSerPheGlu1hrGInArg 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     914 TITITIGGATCCAGAATAAAGCTCGAGCTGT - - TCCTTTAGGCCTTTTTAAAGCGGGAG - 857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               279 Thr ProArdLysSerAsnLeuAspGluGluValAsnVallleProProHisThrProVal 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          319 ProserGluAsmLeulleSerTyrPheAsmAsmCysThrValAsmProfysGluSerIle 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="Soares_mammary_gland_NMLMG" /csex=formale_lactating)?
// sssur type="mammary_gland" /lab_host="foliop="lab" /lab_host="foliop="mammary_gland" /lab_host="foliop="mammary_gland" /lab_host="foliop="mammary_gland" /lab_host="foliop="mammary_gland" /lab_host="foliop="mammary_gland" /lab_host="foliop="mammary_gland" /lab_host="foliop="mammary_gland" /lab_host="foliop="mammary_gland" /lab_host="foliop="mammary_gland" /lab_host="mammary_gland" /lab_hos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismutches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     indels:
                                                                                     /orqanism."Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09-026-459A 39 (1-851) x AA763411 (1-914)
                                                                                                                                                                      /clone-"IMAGE:1247598"
                                                                                                                      /db_xret-"taxon:10090"
Location/Onalitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.656 99
1056.50
82.14%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24.11%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Aliquinent Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                overy Match:
                                               SCHOOL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HASE CHINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ž
FEATURES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           X ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3<del>~</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ξ
```

```
Zhotë-"organ, brain, Vertor, pcMVSP-KT 6, ist strand obna was primed with a not1-old ado(dT) primer. Five prime end enriched, double-stranded cDNA was dispessed with Not 1 and cloned into the Not 1 and Eco RV sites of the pcMVSPOH1 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     by Life Technologies. Contact: Feng Liang Life
Technologies, a division of Invitrogen 9800 Medical Center
Drive Rockville, Maryland 20850, USA Fax: (1) 101 610
8371 Email: iliangelitetech.com UKL:
http://tullegh.invitrogen.com"
148 c :177 q 255 t
                                                                                                                                                                                                                                                                                                                                                                                                                                    linear EST 16 FEB 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   vector. Library was normalized, Library was constructed by Life Technologies. Contact : Peng Liang Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
Eukaryota: Motazoa; Chordata: Craniata: Vertebrata: Euteleostomi:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ALS63757 LIT, NELOOT_NBC4 Homo Sapiens CONA close Subbod7YADS 4
                                                                                                                                                     479 ArgileMetGluSerLeuAlairpLeuSerAspSerProLeuPheAspLeulleLysGln 498
                  539 tysG1ySerThrThrArqVa1AsnSerThrAlaAsnAlaG10thrGhaLathrSerA1a 558
                                                                                                                                                                                                                                                                     Genoscope - Centre National de Sequencage
BP 191-91006 EVRY cedex - France
Email: segref/genoscope.cns.tr, Web : www.genoscope.cns.tr.
                                                                            499 SerLysAspArgGluGlyProThrAspHisLouGluSerAlaCysProLeuAsnLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia; Butheria; Primates; Catarrhin; Hominidae; Homo.
1 (bases 1 to 792)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Full-length cDNA libraries and normalization Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="neuroblastoma_cells"
/lab_host="DH10H"
                                                                                                                                                                                                                                                                                                                                                                                                                                      HENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xret-"taxon:9606"
/clone-"CSODDO07YA05"
/clone_lib-"LTI_NFL001_NBC4"
/sex-"male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                      dq 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                              559 Pla Chi Phribhing Shukasings 566 HH HHHHHHHHHH 25 TYCCATACI CAGAAGCCATIGAAA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AL564757.1 GI:12913464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         prime, mRNA sequence.
AL564757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9.36e 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1043.00
84.53%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81.89%
23.80%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hest Loral Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                  A1.563757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CRCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                           AL563757/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                             RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                    100018
                                                                  .
5
                                                                                                         े
:
    ŝ
                                   q
                                                                                                                                                           ŝ
                                                                                                                                                                                              <u>a</u>
                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                  Š
```

US-09-026-459A-39 (1-851) x ALS63757 (1-792)

```
EST 14-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota: Metazoa, Chorduta; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 605)
163 LysThrAlaValIleProIleAsnGlySerProArqThrProArqArqGlyGlnAsnArg 182
                   SerAlaArgileAlaLysGlnLeuGluAsnAspThrArgileIleGlnValieuCysLys 202
                                                                                            731 AGTGCACGGWTAGCAACACAAYTAGAAATTGATACAAGAATTATTGAAGTTCTCTGTAAA 672
                                                                                                                           203 GlodisGloCysAsnileAspaloValiysAsnValTyrrhcIysAsnPhelleProPhe 222
                                                                                                                                            223 Mei AsnSerLeuGlyLeuValThrSerAsnGlyLeuPrOGluValGluAsnLeuSerLys 242
                                                                                                                                                                                                            243. Arqiyrgʻingini i elyrtoni ysAsni ysAspi.cuAspAluArgi.cu čhei.cuAsphis - 262
                                                                                                                                                                                                                                                                                    551 CGATACGAAGAAATTITICITAAAAATAAAAATCIAGATGAAAGATTATTITGGWICAT 492
                                                                                                                                                                                                                                                                                                                  263 AsplysthrieuGinihraspSerrieAspSerrheGluThrGlnArgThrProArglys 282
                                                                                                                                                                                                                                                                                                                                              491 GATAAAACTCITCAGAYTGATTCIWTAGACAGTTTTGAAACACAGAGAACACGCAGGAAAA 432
                                                                                                                                                                                                                                                                                                                                                                             28 SerAsnLeuAspGluGluValAsnVallleProProHisThrProValArqThrValMet. 302
                                                                                                                                                                                                                                                                                                                                                                                                 403 AsnihriledinGinLeuMetMetHeLeuAsnSerAlaSerAspGinProSerGluAsn 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                              :::
(7) GACAYIWICCAACAATTAAIGATGITTITAAATICAGCAAGTGITCAACCIICAGAAATT 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       423 LeulleSerTyrPheAsnAsnCysThrValAsnProLysGluSerlleLeuLysArgVal 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (6) GluiledlySerClaargTyriysLeuGly: ValatgLeuTyrTyrargVaiMetGluS 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     182 crMctl.cuiysSerGiuGluGluArgi.cuSerlleGlnAsnPheSerlysLcul.cuAsn+ 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          402 AspAsnllePheHisMetSerLeuleuAlaCysAlaLeuGluValValWalMetAlaThrTyr 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ESI (Kochrer,K., Beyer,A., Mewes,H.W., Weil,B. and Wiemann,S.)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DKFZp313P092_rl 313 (synonym: hlcc2) Homo sapiens cDNA clone
DKFZp313P092_s', mRNA sequence.
                                                                                        AL599633.1 GI:15162921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          422 SerArgSer 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11 GCAGIAAGI 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AL599633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ANY ESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MESGI [ 1]
Al 5334 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHIRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RUFERENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOUR NAT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SHIRCE
                                                                                            ã
                                                                                                                             ÷
                                                                                                                                                          £
                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                   Ē
                                                                                                                                                                                                                                                                                                                  49
                                                                                                                                                                                                                                                                                                                                                í.
                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \stackrel{>}{>}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
```

Contact: Koehrer K

MMENT

```
Am Klopferspitz 18a D-82152 Martinsried, Germany
This is the 5' sequence of the clone insert
Clone from S. Wiemann, Molecular Jenome Ansiysis, Octman Cuncer
Kosearch Center (DKEZ): Email s. Wiemannoekfz- heidelberg.do;
Sequenced by BMFZ (Biomedical Research Center at the Charite,
Berlin/Germany) within the cDNA sequencing consortium of the German
                                                                                                                                    No sl sequence available.
This clone (DKF7p3130692) is available at the KZPD in Berlin.
Please contact the KZPD: Ressourcenzontrum, Heubherwey 6, 14059
Berlin-charlottenburg, GERMANY: Email: clonedfzpd.de.
                                                                                                                                                                                                                                                                                                                                                                           /note-"Vector: pTriplEx2: Site_1: SfilA: Site_2: SfilB: cDNA-collection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               218 AsnPhelleProPhcMctAsnSerLeuGlyLeuValThrSerAsnGlyLeuProGluVal 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  238 GluAsnLeuSerLysArqTyrGluGluIleTyrLeuLysAsnLysAspLeuAspAlaArq 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GAAAATGTTTCTAAAGGATACGAAGAAATTTATCTTAAAAATAAAGATGTAGALGCAAGA 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  258 LeupheLeuAspülsAspLysThrLeuGlnThrAspSerTleAspSerPheGluThrGln 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181 TIAITITIGGAICATGATAAAACTCTTCAGACTGATTCTATAGACAGITITGAAACACA; 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              278 ArgthrProArgLysSerAsnLeuAspGluGluValAsnVallleProProPisIhn Pro 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   298 ValArqThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAsp 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361 CAACCTTCAGAAAATCTGATTTCCTATTTTAACAACTGCACAGGAATCCAAAAGAAGT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421 ATACTGAAAAGAGTGAAGGATATAGGATACTTTAAAGAGAAATTTGCTAAAAGCTGTG 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           358 GlyGlnGlyCysValGluIleGlySerGlnArqTyrLysLeuGlyValArqLeuTyrTyr 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481 GAACAGGGTTGTCCAAATTGGATCACAGCGATACAAACTTGGAGTTCGCTTGTATTAC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                318 GlnProSerGluAsnLeuIleSerTyrPheAsnAsnCysThrValAsnProLysGluSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               338 ileteutysargvaltysaspilegiytyrilephetysglutysphealatysalava:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      378 ArqValMetGluSerMetLeuLysSerGlusluGluArqLeuSerTleGlnAsnPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    605
201
0
                                                                                                                                                                                                                                                                                                                    /clone lib-"%1% (synonym: hloc2)"
/dev_stage-"adult"
/lab_host-"DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                    179 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                           /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-026-459A-39 (1:851) x AL599633 (1-605)
                                                                                                                                                                                                                                                                         /dh_xrof="taxon:9606"
/clone="DkFzp313P092"
                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                      106 ਕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.54e-97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1037.00
100 00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                    92 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23.668
                                                                                                                                                                                                                                         .605
                                                                                                                        Genome Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                              HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C.
                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                   RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              red.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
•••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ċ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ۽
```

ŝ

```
349 PhetysClutysPheAlatysAlaValGlyGlmMy/ysValGlutteGlySerMnArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1111E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                           <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                         급
                                                                                      á
                                                                                                                                                                         õ
                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note-"urgan: breast: Vector: puel8: Site_1: Smal; Site_2: Smal; A mini-library was made by cloning products derived trom ORESTES PCR (U.S. Letters Patent application No. 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Project! This entry can be seen in the following URL
(Attp://www.ladwir.eq.lt/erijas/ge/himl.ploilari-miz.Rf042.110
200.014 06845-2000-02-21414-1)
                                                                                                                                                                      BEDB1846 EST 12-JUN-2000 RCZ BT0642 Z102-000 -014 e06 BT064Z Bomo Sapiens cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                       Dias Neto, E., Garcia Gorrea, R., Verjovski-Almeida, S., Briones, M.R., Madal, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F., Goldman, G.H., Carvalho, A.F., Matsukima, A., Bala, G.S., Simpson, D.H., Brunstein, A., deoliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare, M.J., Soares, F., Frentani, R.R., Reis, L.F., de Souza, S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: asimpson-findwiq.org.br
This sequence was derived from the PAPESD/LEW Human Caneer Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ,716 Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mKNA and cDNA amplification were performed under low
                                                                                                                                                                                                                                                                                                                           Eukaryota, Metazoa: Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              429 AsseysThrValAssPretysCluSerIleLeutysArqValLysAspileGlyTyrile 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541 OGATIAATGGAATGCATGCTTAAATGAGAAGAAGGATBAFCGATGGAAATTTTAGC 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Proc. Natl. Acad. Sci. U.S.A. 97 (7), 4491-4496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              i others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ludwig Institute for Cancer Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US 0.9 0.25 459A 39 (1 851) x BE082845 (1-594)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            High quality sequence start: 58
High quality sequence stop: 569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "taxon:'9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Simpson A.J.G.
Laboratory of Cancer Cenetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Unalifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone lib-"BT0642"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            127 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Seq primer: pur 18 lorward
                                                                                                                                                                                                                                  RE082846.1 GI:8473151
                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 694)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1, 7e 96
1030,00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       +55 11 2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fax: +55 11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96.438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                $ 3 to 1 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24.51%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xret
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4,44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sequence tags
                                                                                                                                                                                                                                                                                                         Home Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              211 3
                                                                                                                                                                                                                  BE082846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20202664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Brazil
                                                                                    401 AAA 404
                                         118 Lys 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alaquinent Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                guery March:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Source
                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                       OFGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                  HE082846/C
                                                                                                                                                                                                                  A PESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESTILL 12
                                                                                                                                                                                                                                                                                                                                                                       FILERING.
                                                                                                                                                                                                                                                                                                                                                                                           AULHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOTTENAL
                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LNEWM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KICIN
                                                                                                                                                                                                                                                                                SCHECE
```

```
Melton, D., Meddows, A., Clifton, S., Hillier, L., Marra, M., Pape, D., Wylle, T., Martis, J., Blistain, A., Schmitt, A., Theisina, B., Ritter, E., Ronko, I., Bennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsaqareishvili, R., Williams, T., Jackson, Y., and Bowers, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST 13 MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave. cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Libraries were constructed by Dr. Douglas Melton DNA sequencing by: Washington University Genome Sequencing center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           For information on obtaining a clone please contact: Juliana Brown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AW583181
iallb04, Phuman Pancreatic Islors Homo sapicus cDNA clone
IMAGE:56.8604 5' similar to ab:AL5400 RETINOBLASTOMA ASSOCIATED
PROTEIN (HUMAN): qb:M26.991 Mouse retinoblastoma susceptibility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           409 LeufleuAlaCysAlafeuGluValValMetAlafhrTyrSerArgSerThrSerDthAsn 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    437 IIAELGGGGFGCGFCFGAGGTGTAALGGGCGAAAIAIAGCAGAAAGTACACAAAT CZ8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       429 LeuAspSerGlyThrAspLeuSerPheProTrpHeLeuAsnValLeuAsnLeuLysAla 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           469 MetilelysHisleugluArgCysGluHisArqlleMetGluSerlauAlalrplauther 488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    389 GluArqLeuSerIleGlnAsnPheSerLysLeuleuAsnAspAsnIlePhoHisMet Ser 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        497 GAACGATTATCCATTCAAAATTTTAGCAAACTTCTGAATGACAACATTTTCATATGTCT 438
                                                                                                                                                                                       369 TyrLysLeuGlyValArqLeuTyrTyrArqValMetGluSerMetLeuLysSerGluGlu (888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Douglas Melton, Kiaus H. Kaestner, & Hiroshi Inone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   449 PheAspPheTyrLysVallleGluSerPheIleLysAlaGluGlyAsnLeuThrArqGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            528 thriouserProValArgSerProlyslystysGySerThribrArgVal 545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PERTAPORT PER PERTAPORT STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ,R., Tsaqareishvili,R., Williams,T
WashU-Harvard Pancreas EST Pro}ect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: dmeltonebiotp.harvard.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein (MOUSE)., mkNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (brown@fas.harvard.edu)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AW583181.1 G1:7260125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 623)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rel; 617-495-1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fax: 617-495-8557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MA 02148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ES.
```

```
Anore-"organ: Pancreas: Vector. pSPORTI, Site_1: Not 1; Site_1: Sal 1; Library constructed using SuperScript Plasmid Library kii (Life Technologies) cPNx made by oliqo-dT priminu - Size selected by eclumn fractionalism.
This sequence now available from the IMAGE consortium, for clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        214 ValtyrtheLysasniheletrothemetasn-SerleuGjykeuvalthrSerasnol 233 HHIIHHHIHHHIHHHIHHHHIHHH 64 GIIIAITITATACIIIIAIAGATIGTGTGGACIIGIAAVAICTAAIGG 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         194 ThrArq19elleclev3ltoucystyscluHisGiaCysAsmileAspiluValtysAsm 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER TANA AND THEFFER THE TANA AND THEFFER THE THEFFER TANA AND THEFFER THE THEFFER TANA AND THEFFER THEFFER THEFFER TANA AND THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFFER THEFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              54 FOGUTTGTATTACCGAGTAATGGAATCCATGCTTAAATCAGAAGAAGAAGAATATGCAT 602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       234 yLeuProdluValdluAcoLouSerLysArqTyrGluGluIleTyrLeuLysAsnLysAs 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              254 pLeuAspAlaArqLeuPheLeuAspWisAspLysThrLeuGluThrAspSerIleAspSe 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27 & rPheGluthrGlnArgThrProArgLysSerAsnLeuAspGluGluValAsnValTLePr 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     293 OPFOHISTBEFOVALANGTBEVA) MOTASHTBETLOG | RG | RG | REGENAR | MOTA | 1 | PELONAS | 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            414 nSerAlaSerAspGlnProSerGluAsnLeuIleSerTyrPheAsnAsnCysThrValAs 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.22 (a) Very 1908 (a) Marie 1908 (b) Very 1908 (b) Very 1908 (b) Very 1908 (c) Very 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.2.3. TOCAAAAGAAATATACTGAAAAAAGGTGTGAAGGATATAGGATATACATCTNTAAAGAGAAAATT 48.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35 4 eAlaLysAlaValGlyGlnGlyCysValGluIleGlySerGlsArgTyrLysLeuGlyVa 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 47 t. lArdLeutyrTyrArqValMetGluSerMetLeutysSerGluGluGluGluArqLeuSerIl 393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 ACANGANITATIGANGTICTCTGTGTAAAGAACATGAATGTAATATAGATGAAGATGAAAAT 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  oliqo-dT primino — Sire selected by column tra
average insert size 1.08 kb. Primary library.
unamplified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib-"Human Pancreatic Islets"
/tissue_type-"Islets of Langerhans"
/doc_stage_Admit"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            186 t
                                                               orders contact: into dimage, linl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ength:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              /orqanism "Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                               Seq primer: -40RP from Gibco
High quality sequence stop: 430.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         115 09 026-4598-39 (1-851) X AWS83181 (1-623)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Colone "IMAGE. 5648049"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    109.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /lab_host-"DH10H"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 493 eClinAshPheSerLysLeu 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.090-95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1016.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98.078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0.85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23.19%
                                                                                                                                                                                                                                                                                                                                                                                              ... 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Forcest Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   All-quanent Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                      Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ž
                                                                                                                                                                                                                                                                                                               FEATTRES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NISIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Secore
```

ŝ â ŝ ŝ ŝ ŝ 5 ä ŝ â ŝ 2 Š á ŝ

```
[ (bases | to 871) Marra, M. Bowles, M., Dietrich, N., Dubuque, I., Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, I., Scist, S., Kucuba, T., Lacy, M., Martin, J., Morris, M., Schlenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Theisian, B., Wylie, I., Lennon, G., Soares, B., Wilson, R. and Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Judge-Vector pT713D-Pac (Pharmacia) with a modified polylinker; 1st strand cENA was prepared from mammary gland tissue from a lactating female, and was then primed with a Not 1 - 011go(dT) primer. Double-stranded colon with a Not 1 - 011go(dT) primer. Double-stranded clow with a not 1 - 1 and cloned into the Not 1 and Eco RI sites of the modified pT713 vector. Library is normalized. Library was constructed by Hento Soarcs and M. Fatima Honaldo. " 172 c 204 g 251 t 2 others
                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota, Metaupa, Chordata, Craniata, Vertebruta, Euteievstomi:
Mammalia; Eutheria; Rodentia; Sciuroquathi; Muridae; Murinae: Mus.
                                                                                                                                           vw54h01.rl Soarcs_mammary_gland_NM.MG Mus masculus cDNa clone
IMAGE:1247665 5' similar to gb:M15400 RETINOHIASTCHA ASSOCIATED
PROTECX (HCMAN), qb.M26391 Mouse relinchlastoma susceptibility
protein (MOUSE);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This clone is available royalty free through LLML , contact the IMAGE Consortium (infowimage lin] qov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REO BERCHANSSANANARHARPHILITHER PRAGRAMMENTAN PRAGRECCOCOCOCACAL --CCAG 804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            279 ThrProArglySSerAsn--LeuAspGluCluValAsnValIleProProHisThrProV 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   298 alargThrValMetAsnThrIleCinGinLeuMetMetHeLeuAsnSerAlaSerAsp0 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact. Marra M/Mouse EST Project
WashOrlmAnuse EST Project
WashIngton University School of Medicinep
4444 Forest Park Parkway, Box 8501, St. Louis, Mo 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  =
                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       lib="Soares_mammary_qland_NMLMG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seq primer: -28ml3 rev2 ET from Amersham
                                                                                                                                     HKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /sex="female (lactating)"
/tissue_type="mammary qland"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism-"Mus musculus"
/db_xref-"taxon:10090"
/clone-"!MAGE:1247665"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The Washu HHM1 Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: mouseest *watson.wust1.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-026-459A-39 (1-851) x AA763485 (1-871)
                                                                                                                                871 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop. 495.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /lab_host-"DH10B"
                                                                                                                                                                                                                                                                                            AA763485.1 G1:2813232
603 TCAAAATTTTAGCAAACTT 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.456 94
1013 00
80,348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  __
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                74.488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23.12%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .871
                                                                                                                                                                                                                                                                                                                                                    house mouse.
                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MGI:661353
                                                                                                                                   AA763485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    personal Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                        EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                              RESULT 14
AA763485/c
                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITEE
JOURNAL
                                                                                                                                                                                                                                                  ; ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                     KHYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NIOIXO
                                                                                                                                LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

```
10236423881 NIH MGC 90 Homo Sapiens CDNA clone IMAGE:4472611 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Enkaryska, Metassa, Chardata, Craniata, Verfebrata, Butekeostomi,
Mammalia: Eutheria: Primates: Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                        OB rqValMetGluserMettenLysserGludludrqLeuserIledluAsnPheserL 398
                                                                                                                                                                                                                                                                                                                                                                                                                                               458 bettetysAlaGluGlyAsnicuThrArgGluMetHetysHisLeuGluArgCysGluH 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   498 InSertysAspArgGludlyProThrAspHisLeuGluSerAladysProLeuAanLeuD 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BD3 TTGG GPGGTTTTTGATACTACTGCACCATTAGGGGGTTTTTAATTTFCGCGAAGTATCA 745
                                               418 luProSerGluAshLealleSerTyrFbeAssAshCysTbrValAssProLysGluSerI 338
                                                                                         244 GCCCATCGSAAAATCTTGTTGCCTTCCTTCCATATTGTCCCGTTACCTCCAAAGAACAATC 685
                                                                                                                                        438 TelantysArgVallysAsplieGlyfYrHfePhetysGlufysPheAfalysAlaValG 458
                                                                                                                                                                                     684 TCCTAGGAGCTTAAAGGTTGTCTGCCCACCCTTTAAAAGAGGGGTTCTTAACGCTGTGGGG 625
                                                                                                                                                                                                                               458 lydindlydysValdisiledlySerGibArqfyrLysLeuglyValArqLeuTyrTyrA 378
                                                                                                                                                                                                                                                        564 GTGTGATGANAFCCATGCTTAAATCAGAAGAAGGAGGGTTTGTCCATTCAGAATTTTAGCA 505
                                                                                                                                                                                                                                                                                                                                                                                                                         398 ystantauAsnAspAsnitoehoHisMotSortontontAlacysAlatesGluValValM 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       418 +tAlaThrTyrSerArgSerThrSerGinAsnLeuAspSerGlyThrAspLeuSerPheP 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4/8 rofrpileienAsuValienAsuLeuLysAlaPheAspPheTyrLysValileCluSerP 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           478 isArqIleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysG 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                518 rolengInAsnAsnHisThrAlaAlaAspMetTyrLeuSerProValArgSerProLyst. 538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              548 ystysdlyserthrThrArqValAsnSerThrAlaAsnAlagluThrGlnAlaThrSerA 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NIH MEW http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: eqapbs ramail.trih.gov
Lissue Procurement: ALCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       558 laPheGlnThrGlnLysProLeuLys 566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22 (STEPOATACTOAGAAGCATTGAAA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            H3253544.1 01:12763359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 922)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MRNA Sequence.
B3253543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Botto sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROANTSM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PESSULT 15
B025 454 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FINEREW'E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOSTINAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              I. MMENI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SAURTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  500,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>}</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                           2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
```

```
Site_2: Sall; Clound unidirectionally; olido dI primed.
Average insert size 1.7 kb. Library enriched for full-length clones and constructed by Lite Technologies.
Note: This is a NIEMSC Library."
                                                                                                                                                                                                                                                                               /note-"Organ: liver; Vector: pcMV-SPORT6; Site_1: Not1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA Library Arrayed by: the L.M.A.D.E.Consortion (LLNL)
LNA Sequencing by, incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 GCATTG+GACCAAATTATGATGTGCCATGTATGGCATATGTAAAGTGAAAGAATATAGA 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120 CCTTAAATTCAAAATCAL-GIAACAGCATACAAGGATCTTCCTCATGCTGTTCAGGAGAC 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661 rPheLysArqValLeulleLysCluGluCluTyrAspSerlleIleVulPheTyrAsnSe 681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           681 rValPheMetGlnArqLeuLysThrAsn11eLeuGlnTyrAlaSerTlnArqProFroTh 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    557 GATTÉCTGGAGGAACALCTATATITCACCCTGAAGACTCTATATAAAATITCAGAAGG 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        741 yLeuProThrProThrLysMetThrProArqSerArqIleLeuValSerIleGlydluSe 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        761 rPbcClyTbrScrClulysPhcClbtysHcAsuClaMctValCysAsuScrAspArqVa 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              602 IlelleTrpThrLeuPheGlnHisThrLeuGlaAsaGlu-TyrGlaLeuMetAr4AspAr 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ATCALCIGGACCCTTTTCCAGCACACGCTCCAGAAGAGATATAAAATAAAAAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="adenocarcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
cONA Library Preparation: Lite Technologies, Inc
                                                                    tound through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
Mismatches:
                                                                                 http://image.llnl.gov
Plate: LLAM10293 row: 1 column: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mut ches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
                                                                                                                                                                         /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   :sdry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-026-459A-39 (1:851) x BG254543 (1:922)
                                                                                                                                                                                                                             Zelone lib-"NIH_MGC_90"
                                                                                                                       High quality sequence stop: 633.
                                                                                                                                                                                                            /clone-"IMAGE:4472611"
                                                                                                                                                                                          /db_xref-"taxon:9606"
                                                                                                                                       Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1004.00
40 51%
88.54%
22.91%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
```

- 801 pilediudiyenzaspilualaacpidysniyalisilenungayduseriyaphe 820 ililililililililili: 596 iaifdaadaacadaacadaa maaqaaaaaagaagagagagaacaarci 655

- 841 AspSerMetAspThrSerAsnLysGluGluLys 851 5
- 716 GGAAGCTGGGTACCTCCACACAGGGAAAGAAAG 748

Sourch completed: January 19, 2003, 05:06:23 Job time : 1895.76 sees

```
Contore version 5.1.3
Copyright (c) 1993 - 2093 Compagen Pd
```

nucleur search, using sw model M mucleic Run on:

January 16, 2004, 15:20:22; Search time 4044.87 Seconds (without alignments) 18469.506 Million cell updates/sec

1 CCCCTCATGCCCCCCAAAAC.....AAATGACCATTATTGATACT 3461 Perfect score: Sequence:

TIPENT LTY NOT Seoring table:

Gapop 10.0 , Gapext 1.0

Ct [BU135 Total number of hits satisfying chosen parameters:

15154056 seqs, 8097743376 residues

Searched:

Maximum DB seq length: 2000000000 Minimum DB seq length: 0

Maximum Match 100% Post processing: Minimum Match O%

Listing first 45 summaries

*. TST batabase :

em esthum:* em_estbd:*

om estpl:*
em estro:*
em hte:* em estin:* qb_est 2:* qb_est3:* *****:⊓@18+ ₩+ em_estov:* qb htc:* qb est1:*

em_qss_hum:* em_estium:* • imostom: • qb_est5:* qb est4:* .ssb_qb

em_qss_ofher:* em_qss_fun:* em_qss_inv:* em_gss_mus:* em_dss_pln:* * - 1.17 SSD We

*:oid_asp_mo •⊪dss_rod:• Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

STIMMARTES

					COLUMN TO THE PROPERTY OF THE	
		*				
Result No.	SCOLE	Ouery Match	-	DH.	10	Description
-	910.2	26.3			1023 13 BM450031	BM450031 AGENCOURT
7	40.6			Ĩ	BM561084	BM561083 AGENCOURT
~	80.6	24.7	1081	14		BQ439221 AGENCOURT
4	844.8	74.4		7	RQ220275	BQ220275 AGENCOURT
ĵ.	2.60	a: ::4 ::4	1.44.4	::	AK011246	AKC11246 Mus musca
<u>.</u>	784			-		HM475603 AGENCOTIRT

iocation/Qualifiers 1. .1023

source

FEATURES

MMS458B1 AGENCOURT	SOLLELY AGENCOURT	BG510561 502511848	ALS6 4757 ALS6 4757	B01120416 602591412	BM466194 AGENCOURT	BM453724 AGENCOURT	BIR68459 604392440	BE549278 601064567	BG616219 602644717		BE082846 RC2-BT064	AWSB41Bl iallh09.y	ALS99644 DKFZp414P	BS253543 602464278	AL599105 DKFZp313G	AA763411 VW54a04.1	AW368234 CM3 HT018	AA763485 vw54h01.r	AW182967 Lu08e98.9	AL692790 DKFZp3141	ALL20941 DKF2p762D	BE941246 MR0-HT015	AV715544 AV715544	BF144857 601790344	B1151568 602916108	AA258255 2r59q04.r				B1821116 603035591	BM456728 AGENCOURT	B1526982 602927137	BE934784 RC3 HT094	A1094215 qb04a02.x	ALS98766 DKF2p313F	HE865749 601678131	AI082179 ox75e04.x
RM545881 Al.597811			<		BM466194	HM453724	B1868459	BE5 19278	BG616219	HM264009	HE082846	AW58 4181	<			AA763411		AA76 1485			<					<								A1093215	<		A1082179
22. 22. 22. 23.			6 766	767 12					681 12	618 13				305 ID					01 865	5 49 9					746 13	523	584 12					7 14 13				869 12	447 9
5.0 5.0	8.02		50.5		20.0	19.6	19.1	18.6	18.6	17.8	17.7	17.5	17.5	C1 P+	16.8	16.6	16.4		15.3	15.3				14.8	14.6	14.3	14.1	14.0	9.4			13.7				13.1	12.9
725.4	3002	699.6	698.2	692.2	8.169	678	099	643.6	642.2	617	614	605.2	605	4.363	580	575.2	566.4	558	530.2	530	80 10 10	516.8	513.2	512.2	505.2	493.8	486.4	484.4	481.4	480.2	476.6	74	459.2	457	457	454.2	447
~ æ	₹.	01	c 11	=	13	14	15	16	17	c 18		2.0	2.1	01 01	23	24	25	c 26	2.3	78	5.7 C	30	3]	₹	~	34	3.2	9¢	3.7	æ.	ō,	40	41	. 42	43	44	C 45

ALIGNMENTS

```
linear EST 05 FEB-2002
                                                  BM450031 1023 bp mkNA linear EST 05 FEB-200.
AGENCOURT_6393544 NIH_MGC_72 Homo Sapiens CDNA clone LMAGE:5528037
                                                                                                                                                                                                                                Homo sapiens
Eukaryota: Metazoa: Chordata: Craniata; Vertebrata; Euteleostomi;
Mammalia: Eutheria: Primates: Catarrhini: Hominidae: Homo.
1. (bases: Lto:1024)
                                                                                                                                                                                                                                                                                                                          NIT Was the Y/mec.nci.nih.gov/.

National Institutes of Health. Mammalian Gene Collection (MGC)
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r*mail.nih.gov
Fissue Procurement: ArcZ/DCTD/DTP
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution intornation can be
found through the L.M.A.G.E. Consortium/L.M. at:
Flate. LLANI2204 FGW. d col.ma. 22
High quality sequence stop: 643.
                                                                                                                                                        BM450031.1 GI:18499071
                                                                                                     5', mRNA sequence.
HM450031
                                                                                                                                                                                                          human.
                                                                             DEFINITION
                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                          ACCESS TON
                                                                                                                                                        VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                     AUTHORS
RESULT 1
BM450031
                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                          SOURCE
                                                  COCOS
```

```
/lab_host_hown programs."
//lab_host_moskin, Vertor pGMV-SPORMS Site_1 NotE:
Site_2: Sall; Cloned unidirectionally. Primer. Oligo dT.
Average insert size 2 kb. Library constructed by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2769 JAAGELLEGGAGGTPOTGTYTALGGGAGATTPAATATGTPOAGGFOTTTTTGTGAGAT 2828
                                                                                                                                                                                                                                                                           2169 TCATGCTGTTCAGGAGACATTCAAACGTGTTTTGATCAAAGAAGAGGAGTATGATTCTAT 2168
                                                                                                                                                                                                                                                                                                                                                                                                       2169 TATANTALTITIATAANTIOGGTOTTIOATGOAGAGAAAAGAAAATATTTTGOAGTATGC 2228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2229 TPCCACCAGGCCCCFACCPFGCCAGCAATACCTCACATFCCTCCAAGCCCTTACAAGTT 2288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2348 TCCIAGITCACCCIIACGASATGCTCASASASAA,ADCTAIAIITCACACTGAAAAAGTCC 2348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2349 ATATAAAATTTCAGAAGGTPPGGPAAGAPAAAAAAGAGAGTGGAAGAPGAAGAAGTT 2408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2829 AAAATGTGCAGATGCAATTGTTT--SBGTGATTGCTAAGSCACTGAAAATGTTAGTGATT-2886
                                                                                                                                                                                                                                                                                                                                                         181 FICCACCAGGCCCCCTACCTTGTCACCAATACCTCACATTCCLCGAAGCCCTTACAAAGTT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541 AGGAGACHOGAAATHIOAGCAGAAACHGGGAAAHGAGHTGTAGTGGGAAGAAGGAAGAAHGGA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              721 IAAGII KOCCARTIFICIE BARGOOFAATHTAATATOTOAGATOTITITIGAATAT 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6; Gaps
                                                                                                                                                                                                                                                                                          26.3%; Score 910.2; DB 13; Length 1023; 95.2%; Pred No 7 16-168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches 43; Indels
                                             /clone_lib-"NIH_MGC_72"
/tissue_type "melanotic melanoma"
                                                                                                                                                               281 t.
                                                                                                                            Average insert size 2 kb.
/organism-"Homo sapiens"
/db_xref-"tavon:9606"
                              /clone "IMAGE:5528037"
                                                                                                                                                              197 q
                                                                                                                                                Fechnologies.
211 c
                                                                                                                                                                                                                                          Matches 972; Conservative
                                                                                                                                                                                                                             Similarity
                                                                                                                                                               a
                                                                                                                                                                                                             Voety Match
                                                                                                                                                                                                                              [ova]
                                                                                                                                                                             is on
                                                                                                                                                              HASE
                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>C</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
```

```
ionally. Primer: Oligo dl.
Library constructed by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 20 FIB 2002
                                                                                                                                                                                                                                                                                                                                                                                                                 BANDLOB3
AGENYLOBEL 5555143 NIH_MGC_67 Homo sapiens CDNA clone IMAGE:5550905
57, MRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota, Metazoa, Chordata, Cramiata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                    2947 ITGITI GOTGIIGGAAAGIAAAAIIGGIGIGGGIIIAIGGAIAGIAAGAATGG GGGI 3002
                                                                                                                                                                                 2887 GITATTTATAGAAGATTGAAAATGTTGTGTAAALGGTGCCATTTAAAAAGTLGFAGGAGA 2946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            901 TTGTTTTCTTTTCTTCTTCTAAAAATGCTGTGCCTTALLCGALAGAAGAAATGGCCCCLA 960
                                           841 GITATITATACCAGATIGAAAAIFTIGIGIAAAICCIGCCAATIAAAAAGTIGTAGCAGA 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at: http://mage.lln.aps.prv. n. column: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1267 TTGTATTAPPAPAATAATAATPPATGCTTAAATGAGAAGAAGAAGAAGAAGAAGAAGAA 1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /noie="Organ: eye; Vector: pGMV-SPORT6; Site_1: Noil; Site_2: Sall; Cloned unidirectionally. Primer: Orlgo Site_ge insert size 1.75 kb. Library constructed by "cechnologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 TESTATEACCARTAAFGGAAFCCAFGTTAAAFGAGAAGAAGAAGAATTALCCAFTGAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ATAGOTGTGGGACACAGTTGTGGGAAATTGGATCACAGGGATAGAAAGTTGGAGTLCGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tissue Procurement: ATCC CADA Life Technologies, Inc. CDA Library Preparation. Life Technologies, Inc. CDA Library Arrayed by: The L.M.A.G.E. Consortion (LIAL) DNA Sequencing by: Agencourt Bioscience Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26.3%; Score 909.4, DB 13, Length 1051; 98.4%; Pred. No. 1e-167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /tissue_type="retinoblastoma"
/lab_hcst "DH10B (phage.resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  299 1
                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausborg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /closc_lib="NIH_MGC_67"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="IMAGE:5550905"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: cqapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 High quality sequence stop: 7
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                197 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BM561U83.1 GI:188U6043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 1051)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                938; Conscryative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human.
                                                                                                                                                                                                                                                                         3063 A 3063
                                                                                                                                                                                                                                                                                                                    1021 A 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REPERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOHENAL
                                                                                                                                                                                                                                                                                                                                                                                                             BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TNEWMOO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                        a
                                                                                        े
                                                                                                                                                                                                                            DP:
                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ē
                                                                                                                                   歪
                                                                                                                                                                                     3
```

```
BO4 49221
AGENCOURT 7265562 NIB_MGC_92 Homo Sapiens cDNA clone IMAGE:6015480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Butelcostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                      1987 GAGGITGIAATGGCCACAIATAGCAGAAGTACATGAGAATGTTGATTGIGGAACAGAT 1446
                                                                                                                     447 FIGENTINGCALGGATHENGANG FORTTAATTINAAAAGGCTTIGATTINAGAAGTG 1506
                                                                                                                                                                                                    1507 ATCGAAAGITITATCAAAGGAGAAGGGAACTTGACAAGAGAAATGATAAAAGAITTAGAA 1566
                                                                                                                                                                                                                                                                                 567 CGATGTGAACATCGAAGAATCCTTGCATGGGTGTGTAGATTGACTITATITGA1 1628
                                                                                                                                                                                                                                                                                                                                                              1527 CHAFTAACAA CAAAAAA CTAAAAAA CCAACHA CACCHGAACHGCTT CEE
                                                                                                                                                                                                                                                                                                                                                                                                                                               1687 CTIAATCTTCCCTCTCCAGAATAATCACACTGCAGCAGATATGTATCTTTCTCCTGTAAGA 1746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1747 TCTCCAAAGAAAAAAGGTTCAACTACGGGTGTAAATTCTACGAAAATGCAAAAGAAGAAAA 1806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           807 GNAAGCHCAGCCHTCCAGACCAGAAGCCATHGAAATCTACCTCTCHTTCACTGTTTTAT 1866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1926 AAAAAAGTGTATGGGCTAGGCTATGCGGGGTAAATAGAGTTTGTGAAGGCTTGTGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1927 GAGCACCCCAGAATTAGAACATATCATCTGGACCCIIIICCCAGAGCACCCTGCAGAATGAG 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2047 TOTAAAGTGAAGAATATAGAYCTTAA -ATTCAAAATCATTGTAAGGATACAAGGATCT 2105
                                                                                                                                        181 GAGGTESTAAFGGCCACATATAGCAGAAGTACATCTCAGAATCTTGATTCTGGAACAGAT 240
                                                                                                                                                                                                                                                                                                                                                                                                      481 CTTAATGTTGTLCTCCAGAATAATGACAGTGCAGATATGTTGTTGTCTGTGTAAGA 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      541 TCTCCAAAGAAAAAGITGAAGITAGGGGTGTAAATICTACLGGAAAFGGAGAGAAA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661 AAAAAAGIGIATCGGCIAGCCFAFCICGGGCFAAATACACFFFFGFGAAGGCCFFFFGFFF 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              781 TATGAACTCATGAGAGAGAGACANTTTGGACCAAATATGATGTGTTGCATGTATGGCATA 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 1081)
NIH MG: http://wqc.nci.nih.qov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
2106 TOTTOATGTTGAGGAGAGATTGAAAGGTGT TTTGATGAAAGAAGAGGAG 2157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausborg, Ph.D. Email: eqapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HU4 19221.1 01:21178297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       51, mKNA sequence.
Hp439221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1404 49221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                               Ĩ
                                                                                                                                                         ŝ
                                                                                                                                                                                                    \frac{1}{2}
                                                                                                                                                                                                                                        =
                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                  -
                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \tilde{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ē
```

```
NOLLINITEDN
                  ACCESSION
                                                                                 REFERENCE
                                     KEYWORDS
                                                                                                                    INHWM
                                              S. MIK.E
```

```
/lab_kost "DH10B (phage resistant)"
/note="organ: testis: Vector: pCMV SPORTS; Site_1: Not1;
Site_2: SH1; Cloned uniditectionally; oliqo dr primed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Average insert size 2.5 kb. Library enriched for full length clones and constructed by Life Technologies. Note: this is a NHE-MGG Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2563 GAAGCAGATGGAAGTAAACATCTCCCAGGAGGTCTAAAALITCAGTAGAAATTGGTAGAA 2622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2683 AACAAGGAAGAAATGAGGATGTGAGGAGFTTGGTGGAGGTGTGTAGAGGTFTTGGATTT 2742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2743 CATTGTGTGTGACACACATGTGACTGTATAACTTTGCCAGGTTGTGTTTATGGCCCACATTTA 2802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8043 TGCCTTCTTTGLAGCALAFAGGFGATGTTTGCTCTTGTTTTATTAATTTALAFGTATA 3102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3103 TTTTTTAATTTAACATGAACACCTJAGAAAALGIGICTJATCTATCTICTAAAAAAAA 3162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3163 TITGATIGACIGOCOATICACOAAAATIATCOIGAACICITOIGAAAAAAAAAAAAAA 3222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Z623 ATGAUTICTACICGAACACGAATGUAAAAGGAGAAAAIGAATGATAGCATGGATACCICA 2682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tissue Procurement: AFCC cDNA Library Preparation: Lite Technologies, Inc. CDNA Library Arrayed by: The T.M.A.G.E. Consortium (LINE) DNA Sequencing by: Appropriat Bioscience Couputation (Lional Statibution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301 AAGCCACTTGAAATGTTAGTCATTGTTATTATAGAAAATGTTGTTGTAAAATGC 460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481 IGCCTICTITIGIAGCAIATAGGIGATGTITIGCTCTIGITITATIAAFITAAFAA 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541 TTTTTTAATTTAACAIGAACACCITAGAAAIGIGIGITAICIAICIACAAAIGGAA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 ATGACTTICTACTGGAACACGGAATGCAAAAGGAGAAAATGAATGATAGOTGGATAGGTGA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GAAGCAGATGGAAGTAAAACATCTCCCAGGAGAGTCCAAAATTTCAGCAGAAACTGGCAGAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2803 ATATCITCAGCICITIIGGGAIAIAAAAIGGGAGAIGCAATIGITGGGGGATATTCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2863 AAGCCACTITGAAATGI FAGTCALTGITTATATATAGAATTGAAAALGI LGTGTAAALG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2923 TGCCATTTAAAAAGTTGTAGCAGATTGTTTCTTCTTCTAAAAATTGAAAATTGCTGTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241 ATATCTTCAGCTCTTTTGTGGATATAAAALGTGCAGATGCAAFFGTLGGGGGATTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib-"NIH_MGC_92"
/tissue_type-"embryonal carcinoma, cell line"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ouery Match 24.7%; Score 856; DB 14; Length 10H1; Best Local Similarity 99.1%; Pred. No. 2.8e-157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred, No. 2.8e-157;
0, Mismatches 5;
                                                                                                                                              http://image.linl.gov
Plate: LLAM14211 row: k column: 01
                                                                                                                                                                                                                                                                          /organism-"Homo sapiens"
                                                                                                                                                                                                 High quality sequence stop: 742.
                                                                                                                                                                                                                                                                                                                        /clone="IMAGE:6015480"
                                                                                                                                                                                                                                                                                              /db_vret-"taxon:9606"
                                                                                                                                                                                                                      Location/Qualitiers
1. .1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 892, Conservative
                                                                                                                                                                                                                                                     Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ży
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>q</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
```

```
#0225575
AGENCOUPT 7572621 NIB_MSC_92 Home sapiens obuA clone IMAGE 6044522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_inb.Wit_MGC_92"
/tissue_type="embryonal carcinoma, cell line"
/tab_bost="bild" [bhaqe-resistant."]
/note_noran= lestis: Vertor: pCMV.SDNPf6; Site_1: Not1;
Site_2: Sall; Cloned aniditectionally, Higo-dT primed.
Average insert sire 2 % kb. (thrary enriched for full-conth clones and assatured ky :ifs Technologies.
full-conth class a NHEMMC Library "
1 149 c. 155 q. 264 t.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukarvoja, Metazoa, Chordala, Craniala Vertebrata, Fuleieustomi,
Mammalia; Eutheria; Primates; Catarrhini, Hominidae, Homo.
3223 TAGAAALTAGAAAAAAATTAGTAAFTTTAGAGTTTAGATTTTATTFTAGTATTGGAATGT 3282
                                                                                                  3283 GATATACTGTGTGTTGTTTTAIAAATTTTGCTTTTAATTAAATAAAAGCTGGAAGCAA 3342
                                                                                                                                                                                                  144 AGIATANCCATATGATACTATCATACTACAAACAGATTTCATACCTCAGAATGTAAAA 3402
                                                                                                                                                                                                                                                                                                  3403 GAACTIACTGATTATTTTCTTCARCCAACTTATGTTTTTAAATGA-GGATTATTGATAGT 3461
                                                                                                                       CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by The L M.A.G.E. Consortion (LLNL) DNA Sequencing by: Apercourt Bioscience Corporation (Cloue distribution MPP cions distribution in information on to tound through the L M.A.G.E. Consortium/LLNL at:
                                              1 (bases 1 to 881)
NIH-MGC http://mgc.uci.nih.gov/
National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       653 ALGGLITAPPTPPRAAPAPPOPAGGGGGGGAGAAGAGGGGAGGGGALAGGAAAAAAGAG 712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             533 AAATGGAAGATGATCTGGTGATTTGATTTCAGTTAATGCTATGTGTGCTTGACTATTTTA 592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               593 IIAAANICICACCICCCAIGIIGHINAAAGAANNAAAAANAHGIIAHAHANNAAITA 652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 TTAAACTCTCACCTCCCATGTTGCTCAAAGAACCATATAAAAACAGCTGTTATACCCATTA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2, Gaps
                         24.4%; Score 844.8; DB 14, Length 881,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7, Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. 4.4e-155;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Plafe: 1.1.Am/13287 row: e column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
Confact, Robert Strausberg, Ph.D.
Email: cqapbs-remail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism-"Homo sapiens"
/db xrof "taxon 9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop: 690.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone-"IMAGE:6044522"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tissue Produroment: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ноддойти, он.20401675
ESF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    http://image lini gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       **O 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5', mRNA sequence.
BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 871;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          guery Match
Hest Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PEGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE CHUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERST R
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEFEKEZ E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                              Byzzuz 15.
Lo€0S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHAMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                 £
                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                     Š
```

```
Mammalia, Putheria, Podentia, Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bukarysta, Metazsa, Chendata, Graniata; Vertebrata; Buteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1312 ANTICHARACI PROFILESTATT AND CASTACTA ANTICHARACIA A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1313 GATTATCCATTCAAAATTTTAGCAAACTTCTGAATGACAACA-TTTTTCATATGL-CTLL 1370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1013 ATRIANTIQUEQAÇAÇAÇAÇEĞAĞITAĞĞAÇEĞITA GAAÇAĞTATGCAAÇAATTAATÇA 1072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1073 TGATITIAAAITGAGGAAGAFGAAGGIIGAGAAAAGGIIGATITGGATITIAAGAAGI 1132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1133 GCACAGTGAATCCAAAAGAAAGIALACTGAAAAGAGGTGAAGGATATAGGATACATCTTTA 1192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1193 AAGAGAAAFTFFGTAAAAGPFGTFGGAGAGTFFGTGGAAAFTGGATGAGAGGGATAGA 1252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       713 TAGAAAATGATACAAGAATTATTGAAGITCICIGTAAAGAACATGAAIGTAAIAIAGATG 772
                                                                                                                                                                                                                                                                 773 AGGTGAAAAATGTTTTGAAAATTTTPATACCTTTTATGAATTGTTGGACTTGTAA 832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781 GATTATGCATICAAAAITITAGCAAACIICIGAAIGACCACATHIIILGATATGTGCTTT 840
                                                                                                                                                                                                                                                                                                            893 AAAATAAAGATCTAGATGCAAGATTATTTTTGGATCATGATAAAAACTCTTCAGAGTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus muscullus (strain 057R1/61) 10 days embrye cona to eRMA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  close_lib:RIKEN full length enriched mouse con library
clone:2600017M22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High-efficiency full-length cDNA cloning Meth. Enzymol. 303, 19-44 (1999) 99279253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1364 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Carninci, P. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AK011246.1 G1:12847243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HTC; CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AK311246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ar.11246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCUS
                                                                                                          δ
                                                                                                                                                                                     Ġ.
                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                   ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뎚
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    É
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   듄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
```

```
Adachi, J. Alawaik. Akahirais. Akimuraji., Aono, H., Arai, A., Arakawai, T., Roldarelli, R., Bono, H., Brownstein, M., Bult, C., Carninci, P., Fiwada, S., Pukunishi, Y., Furuno, M., Hanadaki, T., Haraik. Hayaisaki, N., Hilli, D., Hiramoto, K., Biraakai, T., Hori, F., Hume, D., Imotani, K., Ishii, Y., Itoh, M., Izawai, M., Kasukawai, T., Kafo, H., Kawai, J., Kojima, Y., Konno, H., Kouda, M., Koyais. Kurihara C., Matsuyamai, I., Miyazaki, M., Nishi, Y., Nomura, K., Nimazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Ouackenbush, J., Saito, H., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Saito, H., Saito, R., Shibata, K., Shibata, K., Shibata, K., Shibata, K., Shibata, K., Takahashi, F., Indami, M., Taqawai, A., Takahashi, F., Indami, M., Taqawai, A., Takahashi, F., Indamika, I., Yamamura, I., Yamamura, I.,
                                                Carminel.F., Shibata,Y., Hayatsu,N., Suqahara,Y., Shibata,K., Itoh,M., Konno,H., eWazaki,Y., Muramatsu,M. and Hayashizaki,Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare fall length cDNA libraries for rapid discovery of new genes denome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hofmann, M., Hume, D.A., Kamiya, M., Izee, N.H., Lyons, P., Nordone, F., Rarrinoni, L., Mashima, J., Mazaacelli, J., Monbaerts, P., Nordone, F., Rinqaeld, M., Godrionez, I., Sakamoto, N., Sasaki, H., Sato, R., Schoubach, M., Seya, T., Shibata, Y., Storch, K.F., Suzuki, H., Yoyo-oka, K., Wang, K.H., Weitz, C., Whittaker, C., Wilming, L., Wynshaw-Horis, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S., and Hayashizaki, V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Shibata,K., Itoh,M., Aizawa,K., Nataoka,S., Sasaki,N., Carninci,P., Kontoo,H., Akiyama,J., Nishi,K., Kitsunai,I., Tashiro,H., Itoh,M., Sumi,N., Ishii,Y., Nakamura,S., Hazama,M., Nishine,T., Harada,A., Yamuanoto,R., Marsumoto,H., Sakaquchi,S., Ikeqami,T., Kashiwaqi,K., Fijiwake,S., Inoue,K., Towawa,Y., Izawa,M., Ohora,F., Watahiki,M., Fijiwake,S., Kawai,J., Marsumatsu,N., Tanaka,T., Marsumatsu,K., Kawai,J., Okazaki,Y., Mutamatsu,M., Houc,Y., Kira,A. and Hayashizaki,Y., PiKKIN Integrated sequence analysis (RISA) system=-384-format sequencing pipeline with 444 multicapillary sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (10.3III. 2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (REKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Vokobama Institute; 1.7-122 Subhiro-cho, Isurumi-ku, Yokobama, Kanadawa 240 0045, Japan (E-mail:genome-reseaso.iken, qo.)p. (MCLNITEE) General Sciences (GSC), MCLNITEE, General Sciences (GSC), MCLNITEE, General Sciences (GSC), MCLNITEE, General Sciences (GSC), MCLNITEE, General Sciences (GSC), MCLNITEE, General Sciences (GSC), MCLNITEE, General Sciences (GSC), MCLNITEE, General Sciences (GSC), MCLNITEE, General Sciences (GSC), MCLNITEE, General Sciences (GSC), MCLNITEE, General Sciences (GSC), MCLNITEE, General Sciences (GSC), MCLNITEE, GNC), MCLNITEE, GNC, MCLNITEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kawai, J., Shinanawa, A., Shibata, K., Yoshino, M., Itoh, M., Ishii, Y., Atakawa, T., Hara, A., Fukunishi, Y., Konno, H., Adachi, J., Fukuda, S., Alacwa, K., Idawa, M., Nishi, Y., Konno, H., Andachi, J., Fukuda, S., Saito, T., Okodaki, M., Nishi, K., Kiyosawa, H., Kadota, K., Matsuda, H., Ashburner, M., Hatalov, S., Casavant, T., Saito, P., Edischmunt, W., Gasstelland, J., Glassi, C., Kindy, W., Kochiwa, H., Kuchi, P., Lewis, S., Matsuo, Y., Staubli, F., Suzuki, P., Tomita, M., Waquer, L., Washio, T., Sakai, K., Okido, T., Furuno, M., Aono, H., Maldarelli, K., Barsh, G., Blake, J., Furuno, M., Aono, H., Carninel, P., de Honaldo, M.F., Brownstein, M., Lutt, C., Prilla, M., Castineich, S., Hill, D., Pelercher, C., Prilla, M., Castineich, S., Hill, D., Pelercher, C., Prilla, M., Castineich, S., Hill, D., Castineich, S., Kill, M., Castineich, S., Hill, D., Castineich, S., Castineic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Functional annotation of a full-length mouse cDNA collection
Nature 409 (6821), 685-696 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Yasunishi,A., Yoshida,K., Yoshino,M., Muramatsu,M. and
Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genome Res. 10 (11), 1757-1771 (2000)
205-10914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 1464)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fax:81 45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                              20499474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21085660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11217851
REFERENCE
                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JESURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEFFERENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PUBMICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                             FURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MELSI, I NE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PHENAL
                                                                                                                                                                                                                   1.1.1.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           111.E
```

Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN.

cDNA library was prepared and sequenced in Mouse Genome

further details.

COMMEN

Please visit our web site (http://genome.gsc.riken.go.jp/) for

```
ETERPETALGORI KVPDHVPERAMLIWEKSSSVISTEGS I GENERELMGIGTETAAV
DEGEMETETETAKSTETSVKEFEGT RETEGSTAVGAMSELLARINUGALVSKLE
RTCELLYLTOPSSALSTETASMIXLKESMITELLARGEVLOMEDDIV I SFOLMICVVD
                                                                                                                                                                                                                                                                                                                 /clone_lib-"RIKEN Full Fenath enriched mouse cDNA library"
/dev_stage-"10 days embryo"
1. .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /translation-"MPPKAPRKAAAAEPPPPPPPPPREDDPADDSGPEELPLAKLEFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YFIKESPPALLKEPYKTAALPINGSPRIPKRÖUNKSAKIAROLENUTRIIEVLCKEHE
CNITTEVKNVYEKNEIPFINSLGIVSSNEILPEVESLSKEPYFEVYIKNKTITARIELHD
KTLQTDPILGSFETEKIPRKNNPDEEANVYTPHITPVRTVMNTIQOLMVILNSASDQPSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GG10'GA001A 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              304 TTCTTTAACTTAACTTAAAAGAATTGATACCAGTACCAAAGTTGATAATGTTATGTAAGA 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               403 FATATTCAAAAGGAAGGAACTCTGGGGGATCTGCATCTTTAFCGGACTAGTTGATCTA 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    244 - JATERANTOTOTITOA TITIAGESIA INSAAAARAA YATASAAATOA ATAAAA 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       463 GATGAGATGCCATTCACTTTACTGAGGTACAGAAAAGCATAGAAACCAGTGTCTATAAA 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      157 GAAACAGAAGAACCTGATTTTACTGCATTATGTCAGAAATTAAAGATACAGATCATGTC 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels 94; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22.8%; Score 790; DB-11; Length 1464;
81.0%; Pred. No. 2.3e-144;
ative 0; Mismatches 135; Indels 94;
                                                                                                                                                                                                                                                                                                                                                                                                                                /note-"data source:MGD, source key:MGI:97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 others
                                                                                                                                                                                                                        /strain-"C57BL/6J"
/db_xret "FANTOM_DB_2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 346 t
                                                                                                                                                                                                                                                             /db_xret="MGD:MG1:1905260"
/db_xret="taxon:lu090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xret="G1:12847244"
/db_xret="MGD:MG1:97874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /protein_id="BAB27493.1"
                                                                                                                                                                                                        /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               307 4
                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                  Zelone "2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      217 AGAGAGAGGCTTGGTT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NI.1SYFNNCTVNP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start-l
                                                                                                                                                                                                                                                                                                                                                                                                                                                  evidence: ISS
                                                                                                                                                                                                                                                                                                                                                                          /dene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                             >1364
                                                                                                                                                                                                                                                                                                                                                                                                             /gene-"Rbl"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                       .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                    HOST: SOLR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          974;
                                                                                                                                                                                         Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                          9090
                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
linear EST 05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACENCOURT 6480007 NIH MGC 92 Home sapiens conA clone IMAGE:5575683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarihini, Heminidae, Hemo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                164 TITGAAAGAGAGAGAAAAGAGAAAAAAAGTAAGGTTGATGAAGATGAALGTAALLGGT 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1084 ITAGGAAGTGATGACCTTCAGAAATCTGATTTCCTATTTTAACAACTGCACAGTGAAT 1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1803 SILIVALI I CAAAAATI FIATOOCTI I PATAAATI CACTIGGAALI GIAHCA ICHAATIGA 1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1053 CFICCAGAGGTFFGAAAGFFFFFFAAAGGTAFFGAAGAFFFFATGTFAAAAAGAAGAFF 1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        784 CITTALLITOAAAAAHPPPPAPAPPPPAPGAAPPPPPAPGAAPPGTPPGGACTPGPAACAPGGA 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          844 CITCCAGAGGITGAAAATCTITCTAAACGAAGAAAATTIALCITAAAAAIAAAAGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      934 CIAGAIGOAAGATTATTTTGGAIGAYAAAAGTGTTGTTAGTTGTTGATTGTTAGAGAGT 963
                                                                                              484 CIAAAAAGIIITGIIGGAICACAIIIIIAFIAGGIAAAGGGAAAGGAAIACAAAGGAAGAI 543
                                                                                                                                                                      823 OCTOCTOCACTACTCAGAGAGCCATACAAAACAGCTGCACTCCCCATTAATIGGTTTCACCT 882
                                                                                                                                                                                                                                                                                                                                                                                                                                                          724 ACAAGAA FRITGAAGFFCTCTCTCTGTAAAGAACATGAATGFAATATAGATGAGGTGAAAAAT 783
444 YIGTIQAAGAAGIATGA POTATIGTTTGCACTCTTGAGCAAATTGGAAAGGAGAGAGAA 423
                                                                          124 FITATATATATORGACGCAGCAGTTCGATATCTACTGAAATAAATTCTGCATTGGTG 483
                                                                                                                                                                                                                              044 GATCHGGTGALTTCATTTCAGTTAATGCTATGLGLGCTTGACTALTLIALLAAACHCFCA 603
                                                                                                                                                                                                                                                                                                    SII4 PETOPPATITTAPPAAAAAAAAAAAAAAAAAGETGITATTATTAATTAATGATTPAPPER
                                                                                                                                                                                                                                                                                                                                                                                National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                  mRNA
                                                                                                                                                                                                                                                                                                                            1001 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 1001)
NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BM475603.1 GI:18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1144 00 1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
BM$716...3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A.L. ESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWARDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Z.E.
                                  Q
2
                                                                                                                                                      Š
                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                      _{j}^{\ast }
                                                                                                                                                                                                                                                                                                                                            <u>2</u>
                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
```

```
/tissue_type="cmbryonal carcinoma, cell line"
/lab_host='DBIOB (phage=resistant)"
/no-berrang (page phage=resistant)"
Site_2: Sall; Cloned unidirectionally, oliqo dT_primed,
Average insert size 2.5 kb. Library enriched for
full-length clones and constructed by Lite Technologies.
Note; this is a NIH_MCC_Library."
                                                                                                                                                                                                                                                                                                  CDNA Library Preparation: Lite Technologies, Inc.
CDNA Library Preparation: Lite Technologies, Inc.
CDNA Library Arrayed by: The 1.M.A.G.E. Consortium (LLNL.)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MCG.C.clone distribution information an be
found through the 1.M.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM1236 row: 1 column: 04
High quality sequence start: 17
High quality sequence stop: 734.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       321 ARAAATIGALACCAGIACCAAAGITGATAATGCIATGAGAGIGTIGITGAAGAAGIAIGA 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                43 AĞIFAFITÇAFAÇÇAĞTAĞÇAAAĞITĞAFARTÇETAFÇITÇAAĞAĞTĞATGA 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  381 POPATIGERITECEACTION GAAAATT - GGAAAGGACATGIGAACTIATATATITGACAC 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           500 TCACATTTTATTACTTAAAGGGGAAGTATTACAAATGGAAGATGATCTGGTGATTTCAT 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  560 TPCAGFTAARGCTATGTGTCCTTGACTATTTTATTAACTCTCACCTCCCA1G11GCTCA 619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              680 GTCPAPAPAPAFGPFGPAFGPAFGPAGAGAAGAAGIAGAAAAIGATACAAGATTATTGAAG 739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 800 TTATACCTTTTATGAATTCTCTTGGACTTGTAACATGTAATGGAGTTGGAGGTTGAAA 859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               523 TTATACCTTTTTATCAATTCTCTTGGACTTGTAACATCTAATGGACTTCGAGAACTTGAAA 582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 440 AND CARD CARA THE GATA THE ADDITION AND CONTRACT AND CONTRACT TO THE CARD AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND CONTRACT AND C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    283 froaditaatsciatsistolisaciaititaitaaaachotococoatstiscela 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             620 AAGAACCATATAAAACAGCTGTTATACCATTAATGGTTGAGGTGGGAGGACAGGGGGGG 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   740 TTCTCTGTAAAGAACATGTAATATAGATGAGGGGGGAAAAAGGTTTATTTCAAAAALL 799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HITTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELlettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                866 ATCTITCPAAACSAIACSAAGAAATITAICTIAAAAAIAAAGAICTAGAIGGAAGATIAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         223 TOACATTTTTATTAGGTAAACGGGAAGTATTAGAAATGGAAGATGATGTGGGGATTTTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ۳.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CUCLY MATCH

22.7%, Score 786, DR 13.

Best Local Similarity 95.1%; Prod. No. 1.4e-143;
Matches 833; Conservative 0; Mismatches 40.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  288 t
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: Gapbs-rëmail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism "Homo sapiens"
/db_xref="taxon:9606"
/clone="!MAGE:5575683"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib-"NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  186 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  178 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  349 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
OPIGIN
        JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ئ
ت
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ďΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
```

```
/note-"Organ: ovary (pool of 3); Vector: pCMV-SPOR16; Ste_L: EncokV (destroyed); Site_L: Not!; New Source pool of three ovaries, from females ranging in age from 38 to 49 yo. Library is oliqo-dI primed and directionally cloned (EbrokV site is destroyed upon cloning). Average insert size 2.1 kb. insert size range 1.4.5 kb. Library is normalized and enriched for full-length clones and was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGENCHURT_6505183 NIH_MGC_125 Homo sapiens cDNA clone IMAGE:5588245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear EST 20-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    constructed by C. Grubor (Invitrogen). Research Genetics tracking code 036."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryoja, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                           1040-00ACHGTTATGAACACTALCCAACAATTAATGATGTTTTAAATTGAGGAAGTGATCAAG 1099
                                                                                                                                                                                                                                                                                                                                     1100 CITCAGAAAATGTGATIT CCIATITAAGAAGIGGAGAGGAATGGAAAGAAAGIAT 1157
                                                                                                             980 PAPPAGAAAAAGIAAGGTEGAIGAAGAGGTGAAIGIAAIIGGIGGAGAGAGAGIGGAGTFA 1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      chna Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
INNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
920 TTTFGGAFCATAAAAACFCTCAGACTGATCTATAGACAGTTTTGAAACACAGAGA 979
                             763 GGACTGTTA FGAACACFA FCGAACAA FFAA I GA FGA FTFF FAAA FFCAACH GAFGAACH 822
                                                                                                                                                                                                                                                                                                                                                                                             824 CLICAAAAAFGGGALLIICTIATILIIAACAACTGCACGIGGAAFGCCAAAAGAAGC 882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                        21.7%; Score 752.4; DB 13; Length 1122; 95.6%; Pred. No. 5.2e-137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cunA Library Preparation: Life Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           found through the L.M.A.G.E. Consortium/LLNL at: http://mage.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1158 ACTGAAAAAGIGAAGAIATAGATACATCITTAA 1193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           883 TATAPOGGAAAAGAAGCGTAAGGAATATAGGAATAA 918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          359 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plate: LLAM12359 row: a column: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /ordanism "Homo sapiens"
/db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone lib-"NIH_MGC_125"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High quality sequence start, 48 High quality sequence stop: 773.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1122 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone-"IMAGE:5588245"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 1122)
NiH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: eqapbs ramail.nih.gov
Tissue Procurement: Invitregen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               216 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BM545881.1 GT:18778365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5', mRNA sequence.
BM545881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IMPA 58B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOUTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MASE CHUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KELEKEN.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOHNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HM545HB1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PESULI 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 " MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N 1 5 1 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50. * 4
                                                                                                                                                                                                                             Š
                                                                                                                3
```

2428 TPOGGGACTFCFCAGAAGTFCCAGAAAATAAAFCAGATGGTATGTAACAGCGGCGGTGTG 2487

6; Gaps

Indels

12;

0; Mismatches

Matches 827; Conservative

```
ALS97811 PKEZP3130816_11 313 (Synonym, blee2) Homo sapiens cone DKEZp31300816_51, mkna sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3205 TGCAAAAAT-GGATATTATTAGAAATTAGAAAAAATTACTAATTTTACAAATTA 3263
                                                                                                                                                                                                                                                            2668 ACCATIGATACCTICAAACAAGGAAGAGAATIGAGGAFFTICAGGAPFTTIGGTGGACATIGT 27.27
                                                                                                                                                                                                                                                                                                                                                                                              2288 TIATGGCCACATTAATATGTTCAGGTGTTTTTGTGGGATATAAAATGTGAAATT 2847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2728 GTACACCICTGGATICATICICICICACAGARICIGACITATAACITTECCAGGITECIG 2787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2908 ATCTIGIGIAAATCCIGCCATITAAAAAGTIGIAGCAGATIGITICCICTCTTCCAAAGIAA 2967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2968 AATTGCTGTGTTTATGGATAGTAAGAATGGCCCTAGAGGGGAGTCCTGATAACCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3028 CCTGTCTGACTACTTTGCCTTCTTTGTAGCATATAGGTGATGTTLGCTCTTGTTTTTAT 3027
                                                                                                                                                                                                                                                                             780 AATTGCTGTGCTTTATGGATAGTAAAAATGGCCCTAGAGTGGGAAGTGCTAATAACCAGG 839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360 ATTICANGATICAGATICAGATICANAGTICANGATICANGATICACIONICANGAGATICANAGATICANGA 419
                                                                                                                                                                                                                                                                                                                                                                                                                                600 TIAIGGCCACATITAAIAICIICACITTIIIGIAAIAIAAAAIGCAGAIAIAAAAIGCAGAIAIGAAIG
2488 CLCAAAAGAAGTGGTGAAGGAAGCAACCTCCTAAACCAPTGAAAAAAATTAFGTLTGAL
                                                                                                                      2548 ATTGAAGGATCAGATGAAGGAATGGAAGTAAACATGTGCCAGGAAGTCCAAATTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                3088 TAATITATA--TGTATATITITITTAATITAACATGAA CACCCTTAGAAAATGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300 CTCAAAAGAAGTGCTGAAGGAAGCAACCCTCCTAAAACCACTGAAAAAAATTACGCTTTTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         959 TCTATCTTCCAAATGCAATTTGATTGACTGCCCATTCACC AAATTATCCTGAACTGCTC
                                                                       3264 IATTTTACTATIOGNATOTOAIAIA 3288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1078 TATTTTACTATTGAAAAAGGGAATA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AL597811.1 GI:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1,00118
                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ĝ
                                                     ò
                                                                                    qq
                                                                                                                       ć
                                                                                                                                                       ā
                                                                                                                                                                                         ò
                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
```

```
о
,
Poustka.A., Wellenreuther,R., Mewes,H.W., Weil,B. and Wiemann,S.).
ESI (Poustka.A., Wellenreuther,P., Mewes,H.W., Weil,R. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /hote="Vector: pTripHEX2; Sitc_1: SfilA; Sitc_2: SfilB; cDNA-collection"
                                                                                                                                                                                                                                                                                                                                                                                                                         Heidelberg/Germany) within the o⊓NA sequencing consortium of the
                                                                                                                                                                                                                                             Fax: .49.30-84131128
Email: poustkaemping-berlin-dahlem.mpg.de
This is the 5' sequence of the clone insert
Clone from 3. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (UKF7); Email s.Wiemann9dkf2, heidelberg.de;
sequenced by DKFZ (German Cancer Research Center)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No st sequence available.
This clone (DKEXp31300BLG) is available at the KZPD in Berlin.
Please contact the PZPD Bessourcementum, Hentmerweg 5, 14059
Berlin-Charlottemberg GEPMANY: Email: clonewrypd de
Loration@publitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1899 AAATACACITTGTGAACGCCTTCTGTCTGAGCACCCAGAATTAGAACATATCALCTGGAC 1958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1839 GAAATCTACCTCTTTTCACTGTTTTATAAAAAGTGTALO3307AGGCTATGTAGA90P 1898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2019 AAITAIGAIGIGTOOAFGTATGGAAAAGGAAAGAAAGAAATAIAGAGGITAAATIGAA 2078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2-79 AATCALLGTAACAGCATACAAGGATGTTGCTGATGCTGTTGAGGAGGAGATTCAAAGGTGT 2138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2319 GAACATCTATATTTCACCCTGAAGAGTCCATATAAAATTTGAGAAGGTCTGCCAACACC 2378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1959 COTITICOAGCACACTOTOGAGAAIGAGIAIGAACICAIGAGAGAGAGACAIGIGGACCA 2018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2139 IIIGAICAAAGAAAGAAGTATCATICIATIATAGIATICIATATAATAACTCGGTCTTCTTGTGCA 2198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2299 GAGACTGAAAAACAAATATTTGCAGTATGCTTPCAGGGGGGGCCTACCTTGGGGGGAAAA 2258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2259 ACCICANATICCIGGAAGCCGTIACAAGTITICCIAGTICACCCTIACGGAITCCIGGAGG 2318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301 TFIGALCAAAGAAGAAGAGFATGATTCTATTATAGTATTCTATAACTGGGTCTTCATGCA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361 GAGACIGAAAACAAAITITGCAGIAIGCTTOCACAGAGGGGTACCIIGCTIGICAAI 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421 ACCICACATICCTCGAAGGCCCTTACAAGTTTCCTAGTTCAGGTTACGGAATTCCTGGAGG 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 AAATACACITIGIGAACGCCTTCTGTCTGAGCACAGAAATAAGAACAIATGATCTGGAC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21.0%; Score 725.4; DB 9; Length 727; 99.9%; Pred. No. 1e-131; tive 0; Mismatches 1, Indels 0
                                                                                                                                                                Max Planck-Institute for Molecular Genetics
Thnestrasse 73, 14195 Berlin, Germany
Tel: +49-30-84131623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /cionc-"DKrzp3i300816"
/clone_lib-"313 (synonym: hlcc2)"
/dev_stage-"adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  198 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism-"Homo sapions"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Adb xrof. "taxon. Ghon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  130 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alab_host-"PHIOR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                      German Genome Project.
                                                                                                          Contact: Poustka A.J.
                                                                                                                                           Department Lehrach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  161 c
                                                                                Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 18 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOIL'0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
ALLE: KS
                                                                                POTRIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                          11 E.E.
                                                                                                             LNEWMON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
```

```
BQ222227
AGENTRELTIGEST HIMLMED BENG SELETES DENA CLORE IMAGE:604156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note "Organ, testis, Vector: pCMV-SPORT6, Site_1: Not1: Site_2. Sail, Cloud unidirectionally; oligo-dI primed. Average insert size 2.5 kb. inbrary enriched for tull-length clones and constructed by Lite Technologies. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eŭkarjoja, Metazoa, Chordata, Graniata, Vertebrata, Euteleostomi;
Nammalia, Eatheria, Primates, Catarrhini, Hominidae; Homo.
                                                                                             2439 TGAGAAGTTGCAGAAAATAAATCAGATGGTATGTAAGAGGGACCGTGTCAAAAGAAG 2498
                                                                                                                                                                                           2379 AACAAAATGACTCCAAGATGAAGATCTTAGTATGAATTGGTGAATGATTGGGGGACTTG 2438
                      cDNA Library Preparation. Life Technologies, Inc. CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                                                                                           601 TGAGAAGTTTGAGAAAATAAATGAGATGGTATGTAACAGCGACCGTGTGCTCAAAAGAG 660
                                                                                                                                                                                                                  National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          382 GTATTGTTTTGGACTCTTCACCAAATTGGAAAGGAGATGTGAAGTTTATATATTTGAGAGAA 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     442 POPAGPASTICSAIALCIASAAIAAAIICIGCAIIGGIGCIAAAAGIIICIIGGAIC 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 CCCAGCAGTTCGATATCTACTGAAATAAATTCTGCATTGGTGCTAAAAGTTFCTTGGATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20.8%; Score 720.6; DB 14; Longth 880; 98 7%; Pred No. 8.8e-131;
                                                                                                                         /tissue_type="embryonal carcinoma, cell line"
/lab_host-"5H10B (phase resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred No 8.8e-131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Plate: LLAM13279 row: i column: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="IMAGE:6041563"
/clone_lib-"NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 880)
NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Righ quality sequence stop: 606.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-r@mail.nih.gov
Tissac Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ЮОБББББ7.1 G1:20403627
НОБББББ7.1 G1:20403627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         737; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         088.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                         2559 ACATGAA 2565
                                                                                                                                                                                                                                                                                                                                         721 AGATGAA 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ouery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NULLINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCUSS:ON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KHYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                         17777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                 d
d
                                                                                                                                                                                                                                         ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
```

```
HGG10561 BY 18-APR-2001 6251 By mkNA Linear EST 18-APR-2001 602611848E1 NIH, MGC_60 HGMO Sapiens GDNA cione IMAGE:4737634 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
Enkaryota: Metazoa: Chordata: Craniata: Vertebrata: Enteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1042 ACTGTFALGAACACTATCCAACAATTAATGATGATTTTAAATTCAGCAAGTGATCAA-GC 1100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     482 COAGGAAAAAGTAAGGTFGAFGAGAGGGAAATGFAAFFGCFGCACACACAGTFGGA 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        502 ACATTITIATIAO JAAAQ JOGAAGIA EFACAA JIGGA GAAGA JIGGA FEGA FEFT 561
                        802 ATACCTTTTATGAATTCTCTGAGACTTGTAACATCTAATGGACTTCCAGAGGTTGAAAAT 861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481 CTITCTAAAGGATACGAAAAAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTATTT 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   922 TEGGATCATGATAAAAGTCTFCAGACTGATTGTATAGACAGTTTTGAAACACAGAGACA 981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA Sequencing by: Incyte Genomics, Inc.
Flowe distribution: MCC clone distribution information can be
tound through the L.M.A.G.E. Consortium/LLNL at:
                                                                                       562 CASTIAATGCTATGTCCTTGACTATTTATTAAACTCTCACCTCCCATGTTGCTCAAA 621
                                                                                                                                                                                   6.22 GAAMATATAAAAGGGTGTGTTATACGGATTAATGGTTCACGTCGAACACGCAGGCGAGGT 681
                                                                                                                                                                                                                               241 GANGOTATAAAAAGAGCTGTTATAGGGATTAATGGTTGAGGTGGAAGGAGGGGAGGT 300
                                                                                                                                                                                                                                                                           682 PAGAAPAGAGTI SCACIGA AGCAAAACAACTAGAAATIGATIAATI ATTIGAAGTIT 741
                                                                                                                                                                                                                                                                                                                       801 CAGAACAGAAJTGCACGGATAAGAAAAAAACIAGAAAATGATACAAGAATTATGAAGTT 360
                                                                                                                                                                                                                                                                                                                                                                       742 CTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATTTT 801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         862 CITTECTAAACGATACGAAGAAFITATCITAAAAATGAAGATGTAGAAGATATITT 921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cDNA Library Preparation: CLONETECH Laboratories, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia: Butheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plate: LLCM1605 row: o column: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stop: 709.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NIH MGC http://mqc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1101 TECAGAAAATCTGATTTGGTATTTAA 1127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721 ITCAAAAAFCIGALTIICCIAIIIIA 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cqapbs:r@mail.nih.gov
Tissue Procurement: DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BG510661
RG510651.1 GI:13662032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 824)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mENA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NEEL INTEREST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             J-MIKNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BCF-10661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1111E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   I NIHWW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ÷
                                                                                                                                                                              Š
                                                                                                                                                                                                                          ÷
                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                  ã
                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
```

Location/qualitiers

FEATURES

```
/tissue_irp_min_mastroma*
/tissue_irp_min_mastroma*
/issue_irp_min_mastroma*
/issue_rppe*_addenorarethoma*
/issue_rppe*_addenorarethoma*
/issue_rppe*_addenorarethoma*
/issue_rppe*_addenorarethoma*
/issue_irsuparts_irroma*
/issue_irroma*
/issue_irsuparts_irroma*
/issue_ir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2589 AGGAGAGTCCAAATTTCAGCAGAAACTGGCAGAAATGACTCTACTCGAACACAAGAA 2648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2709 GGACCTTGGTGGACACTGTGTACACCTCTGGATTCATTGTCTCTCTACACATGTGACTGTA 2768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2949 GTTTCCTTCCAAAGTAAAATTGCTGTGTTATGGATAGTAAGAATGGCCCTAGAGT 3008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0069 TGTTTGCTCTTGTTTTATTATATGTATGTATTTTTTTTTAAATTTAACACGCT 3128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1129 TAGAAAATGTGTCCTATCTTCCAAATGCAATTTGATTGACTGCCCATTCACCAAAA 3188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3189 TITATICTICAAACTICTTICTICCAAAAATICGATATTAITTAGAAATTT----AGAAAAAATTTAITA 3245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3009 GGACTICCTGATAACCCAGGCCTGTGTGACTTTGCCTTCTTTTGTAGGATATAGGTGA 3068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         246 ATTTTACACATTAGATTTTATTTACTATTGGAATCTGATATACTGTGGTGCTTGTTGTTAT 3305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421 GGAGTCCTGALAACCCAGGCCTGTCTGACIACTTGCTTTTGTTTGTATATAGGTGA 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601 TTATCCTGAACTCTTCTGAAAAATGGATATTATTCCGAAATCACGAAA;ACAATTACTA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8dPO 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 AGGAGAGTOCAAATTTCAGCAGAAACTGGCAGAAATGACTTCTACTCGAACAGGATGCA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2769 TAACTTTCCCAGGTTCTGTTTATGGCCACATTAATATGTCGAGGTTTTAGTGGAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2829 AAAATGTGCAGATGCAATTGTTTGGGTGATTCCTAAGCAGTTGAAATGTTAGTAATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2889 TATTTATACAAGATTGAAAATCTTGTGAAAATCCTGCCATTTAAAAAGTTGTAGCAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 TAACTTTCCCAGGTTCTGTTTATGGCCACATTTAATATCTTCAGCTCTTTTGTGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DE 12. Length 823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Inde | s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 699.6, DR 12
Pred, No. 1.1e 126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
/organism="Homo sapiens"
                                                                                                         /clone_lib-"NIH_MGC 60"
                                    /db_xret-"taxon:9606"
/clone-"IMAGE:4737634"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20.02
24.88
38.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 779; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             슬
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           े
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q()
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    d
```

```
AL563757 LIL_NFL061_NBC4 Homo sapiens cDNA clone CSOPPGOTYAGS 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Joste-Torano Ersin Verter provided is struct orwa was primed with a Notl-Oligo(dT) primer. Five prime end enriched, double-stranded cDNA was digested with Not I and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cloned into the Not I and Eco RV sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by life technologies. Contact: Forg Liang Life (cechnologies, Contact: Forg Liang Life (cechnologies, a prission of Invitrogen 9800 Medical Center Drive Poreville, Maryland 2087, USA Fax (1) 901 610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3, Gaps . 2,
                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryofa; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria, Frimates, Catarrhini, Hominidae; Homo. [Tabases 1 to 792]
Li.W.B., Gruber, C., Jessee, J. and Polayes, D.
Eil.W.B., Gruber, C., Jessee, J. and Polayes, D.
Full-length or NA libraries and normalization
Unpublished (2001)
9.9.0.GAGTGCACGGATAGCAAAACAACTAGAAAATGATACAAAAATAATTGAAGTTGTGTGTAA 749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     750 AGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTTATTTCAAAAATTTTTATAGCTTTT 809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               810 IATGAALICICITGGACHTGTAACATCTAATGGACTTCCAGAGGTTGAAAATCTTTCTAA 869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      870 ACGATAGGAAGAATTTATCTTAAAAATAAAAATTAAGATGGAAGATTATTTTGGATA 939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genoscope - Centre Mational de Sequencaye
RP 191-91006 EVRY cedex - France
Email: seqrelagenoscope.cns.lr, Web : www.genoscope.cns.lr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20.2%; Score 698.2, DB 9, Length 792, 93.6%; Pred No. 2 le-126; Line 23, Mismatches 23, Indels 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26 of Ners
                                                                                         3467 TACTACTGAAACAGATTTCATACCTCAGAATGTAAAAGAACT 3407
                                                                                                               /tissue_type="neuroblastoma cells"
/lab_host="pH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          http://fulllength.invitrogen.com"
148 c - 117 g - 255 t - 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone_lib-"LTI_NFL001_NBC4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/db_grof="favon:94604"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone-"csammon7yA05"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                  Al.563757.1 GI:12913464
                                                                                                                                                                                                                                                                                                   prime, mRNA sequence.
AL563757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /sex-"male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .792
                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             foral similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 722.
                                                                                                                                                                                                                                                                                                                                                                          EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOUTCE
                                                                                                                                                                                                                                                                                                                                                                                                                      RESANISM
                                                                                                                                                                                                       RESULT 11
AL5647577
                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE TUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
Jediknal
                                                                                                                                                                                                                                                                                                                            ACCESSION.
                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTH ES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KELFERI NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Z WW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 2
                                                                                                                                                                                                                                                     \Sigma \Pi, \forall \ \Pi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
```

```
767 bp mRNA linear EST 10-APR-2001
E02°91312F; NIH_MGS_77 Homb Sapiens CDNA clone IMACH:4717874 5-,
MRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="NHH_MGC_77"
/lab.host="DHIOB (II phage-resistant)"
//note="Organ: lung, Vector, piNR-LiB (Clontech); Site_l:
SLII (gqccqcctcqqcc); Site_2: SLII (gqccattatqqcc); 5' an
3' adaptors were used in cloning as follows: 5' adaptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metabba, Chordata, Craniata, Vertebrata, Euteleostomi:
Mammalia: Eutheria: Primates: Catarrhini; Hominidae: Homo.
                                                                                                                                                                                                                                                                                                    1050 GAACACTATCCAACAATIAATGATGATGATTCAGCAAGTGATGAACCTTCAGAAAA 1109
                                                                                                                                                                                         940 ANGIAN TIGALGAAGAGAGAGATATAATIOTOCACACACTCCAGITAGGACTGITAT 1049
                                                                                                                                                                                                                                                                                                                                                                                                                  1110 TOTICATIFICOTATITITAACAACTGCACAGIGAAFICCAAAAGAAGIATACTGAAAAGAGI 1169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1170 GAAGGATATAGGATACATCTTTAAAGAGAAAITIGCTAAAGATGLGGGACAGGGILGIGT 1229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1230 GGAAATIGGALGACAGGGATACAAACTIGG--AGIIGGGIIGIATIACCGAGIAALGGAA 1287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1288 TCCATGCTTAAATCAGAAGAAGAGATTATCGATTCAAAATTTTAGGAAACTTCTGAAT 1347
                                                                                                                                                                                                                                                                                                                                 cDNA Library Preparation: CLONTECH Laboratories, Inc. cond. Library Arrayed by: The L.M.A.G.E. Consortium (LLNI) buna Sequencing by: Incyte Genomics, Inc. Clone distribution information can be clone distribution. MGC clone distribution information can be
                                                                                                                                                                                                                                                432 AAGTAACCTTGWTGGAGAGGTGAATGTAATTCCTCCACACACTCCAGTTAGGAYTGTLTT 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          192 CGANATTGGATCACAGGATACAACTTGGTTGTTTCGCTGTATTACCGAGTAATGGAA 133
930 TGATAAAACTCTTCAGACTGATTCTATAGAGAGTTTTTGAAACACAGAGAAGAGGAGGAAA 989
                                                                                                                                     NIH MGC http://mgc.ori.uih.gov/. National institutes of Health, Mammalian Gene Collection (MCC) National institutes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       132 ICCAIGCTITATICAGAAGAAGACGAITAICCAITCAAAATITTBGCACACTICTGAAI 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1348 GACAA-CATITITCATAIGICITTATIGGGGGGGGCTC11GAGGT1GTAAT 1597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     found through the I.M.A.G.E. Consortium/LLNL at: http://image.llsl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email. caapbs remail.nib.gov
Tissue Frocurement. CLONIESH Laboratories, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plate: LLCM1568 row: h column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact, Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="IMAGE:4717874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stop: 726.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BG570456.1 GI:13578109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 767)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BG570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NOT LINITED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
BG570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTHURS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                 ã
                                                                                                                                                                                                                                                                                                                                                           긭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
```

```
5' CACGGCCATTATGGCC: 1' and 1' adaption sequence;
   5. ATICTANASCICIONARCOSCIONATO and f. adaptor sequence: 6. ATICTANASCICIONARCOSCIONATO (4.0) BN-3 (Where B - A, C, C, OT 1). Average insert size 1.9 kb (range 0.5-4.0 kb). 12/15 colonies contained inserts by PCR. Phis library was enriched for full-length clones and was constructed by Clontech Laboratories (Palo Alto, CA). Note: 118 is a NILMSC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear EST 05-PEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HM466194 160car EST 05-PEB-2003
AGENCLURI 6456973 NIH_MGC_92 HOMO SAPÍCHS CONA CLONE IMAGE:5576939
                                                                                                                                                                                                                                                                                                                                                                                                      2669 GOALGOALACCECAAAACAAGGAAGAAALGAGGATELEAGGATCHEGGGGACHEGGGACACHGTG 2728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2789 TAINGO AGAITHAATAHOTICAGO ICHTTIIGIGGAIAHAAAATGIGCAGAGOCAATIG 2848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8089 AATTTATATGTATATTTTTTAATTTAACATGAAGGCCTTAGAAAATGTGTCCTAATGTA 3148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3149 TOTTOCAAATGCAATTTGATTGACT-GCCALTCACCAAAATTATGCTGAAACTGTGTGT 3207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3208 AAAAATGGATATTATTAGAAATTAGAAAAAFTAGTAATTTTAGAGATTAGATTTTATT 3267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3328 AAAAQCTGGAAQCAAAAGTAFAACCAFATACTAFCATACTACTGAACAGATTTGATA 3387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2729 TACACCTCTGGATTCATTGTCTCTCACAGATGTCACTGTATAACTTTGCCAGGTTGTGTT 2788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2849 TELEGOLGATION BAGGGANTIGAAATGITAGITGITTATITIALANAGATIGAAAA 2908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2909 TCTTGTGTAAATGGGGGATTTAAAAAGTTGTAGGAGATTGTTTGGTGTTGGAAAGTAAA 2968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1929 (PERCIOACTACH FIGGER (FILES) AGCA FA FAGGRA FOR FIGGER FIGURIATE TO 1888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 TATGGCCACATITAATATCTTCAGCTCTTTTTGTGGATATAAAATGTGCAGATGTGCAATTG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301 ATTGCTGTGTTTTATGGATAGTAAGAATGGCCCTAGAGTGGGAGTCCTGATAACCCAGGC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541 AAAAALGGALALLALAGAAALLAGAAAAAALTACTATTTTACACALLAGATTTTAFF 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  660 AAAAGCTGGAAGC AAGTATAACGATATGATACTATGATACTAATGAAAGAGATTTCATA 718
                                                                                                                                                                                                                                                                                                                                                  4; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 0741034146CLCAAACAAGGAAGAAGAAALGAGGATCTCAGGACCTTGGLGGACACGTG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2969 ALLOCTETECTETATION FOR TAGEN ACTION CONTRACT ACTION ACCORDER.
                                                                                                                                                                                                                                                                                  20.0%; Score 692.2; DB-12; Length 767; 97.1%; Pred. No. 3.2e-125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3388 CHICAGAATGI AAAAGAACHIACHGAFIAHTITITITICATGCAACTTAT 3435
                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              719 CYTCAGAAATGTGAAGGAACTTACTTGATGCAAATTAT 767
                                                                                                                                                                                                                                                                                                                                                                                                                                     1.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. 3.20-125;
0, Mismatches 18;
зыданысыз
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5', mKNA sequence.
BM466194
                                                                                                                                                                                                                                                                                                                                         747; Conservative
                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                   245 4
                                                                                                                                                                                                                                                                                        Smitz Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NOT LINITED
                                                                                                                                                                                                   RASE COUNT
                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
HM466194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                              X ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      211,821
```

=

Š

5 ŝ =

3

5 â 5

 $\frac{5}{5}$

~

5

5

3

5 ÷ 7.0

5

```
/tissue_type="@mbryonal careinoma, cell line"
//lab_bost="hHi0b" (phage=resistant)"
//noie="Grada: testis: Vector: pGWN-SPORT0; Site [: Noil; Site_2: Sall, Cloned unidirectionally; oligo dT primed.
                                                                       Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Average insert size 2.5 kb. Library enriched for full-length clones and constructed by Lite Technologies. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2605 CAGCAGAAACTGGCAGAAATGACTTCTACTCGAACGAATGCAAAAGCAGAAAATGAAT 2664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2725 TGTGTACACCTCTGGAITCATTGTCTCTCACACATGTGACTGTATAACTTTCCCAGGTTC 2784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2905 AAAATCTTGTGTAAATCCTGGGATTTAAAAAGTTGTAGGAGATTGTTFGCTGTTTCAAAG 2964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2965 TAAAATTOCTGTGTTTATGGATAGTAAGAATGGCCCTAGAGTGGGAGTCCTGATAACCC 3024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3025 AGGCCTGTCTGACTTGCCTTCTTTTGLAGCALALAGGTGALGTTLOCTCTTTT 3084
                                                                                                                                                                                                                                                                                     Tissue Procurement: ATCC CDNA Library Preparation: Lite Technologies, Inc. cDNA Library Arrayed by The LM.A.G.E. Consertion (LLNL) DNA Sequencing by Agglebourt Bioscience Corporation Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2785 TGTTTATGGCCACATTTAATATCTTCAGCICTTTTTGTGGATA1AAAATGTGCAGATGCA 2844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2845 ATTGTTTGGGTGATTCCTAAGGCACTTGAAATGTTAGTCATTGTFATTTALALAGAGATTG 2904
                                                                                                                                                               All MGG http://mac.nci.uih.gov/.
National institutes of Health, Mammallan Gene Collection (MGC)
Unpublished (1999)
Contact: Kobert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 GATAGCATGGATACCTGAAACAAGSAAGAGAAATGAGGALCTCAGGACCTTGGTGGACAC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301 AAAATCTTGTGTAAATCCTGCGATTTAAAAAGTTGTACAGATTGTTTCTTTTTCGAAAGTA60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2665 GATAGCATGGATACCICAAAAAAAAAAAAAAATGAAAATGIAAAAATITAGTGAAAA
                                                                                                                        Mammalia; Eutheria; Primates; Catarihini; Hominidae; Homo.
1 (bases 1-10-972)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20.0%; Score 691.8; DB 13; Length 972;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                found through the 1.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Plate: LLAM12429 row: j column: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Prod. No. 4.8e 125;
0; Mismatches 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         323 +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /orqanism-"Homo sapieus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="IMAGE:5576939"
/clone_lib="NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           High quality sequence stop: 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                        Email. cqapbs-r@mail.nih.qov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      169 q
BM466194.1 GI:18515236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rest Local Similarity 96.7
Matches 728; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 972
                                                   human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HASE COUNT
                                                                                                                                               REFERENCE
                                                                                                                                                                    AUTHERS
                                                                                                                                                                                                                     JOURNAL.
                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                TITLE
VERSION
                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <del>2</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
```

7

```
EST 05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue_type="mclangtic melanoma"
/lab_host="DH10B (phage=resistant)"
/note="Organ: skin; Vector: pCMV-SPORT6: Site 1: NotI:
Site_2: salt; Cloned upidirectionally. Primer: Olige HT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota: Metazoa; Chordata, Craniata, Vertebrata, Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Library Jonstructed by Life
2005 TATIAALITATATGTATATITTTTTAATTTTAACATGAACACCTTACAAAAATGTCTCCTA 3144
                                                                                                                                                                              205 IGCAAAAAIGGATATTATAAGAAATTAGAAAAAAATACTAATTTACACATTAGATTT 3264
                                                                                                                                                                                                                                                                      +TGCTTGTTTTATAAATTTTGCTTTT 3319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0.145 TOTATOTTOCAAATGGAATTTGATTGACCATTCACCAAAATTATCCTGAAATTGTC 5204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1565 ACCATCTGACATCCATCCATCCCTTCCATCCCTCCACATTCACTTTGA 1625
                                              481 TATIAATITAIATGTATATTTTTTAATTTAACATGAAGACGCGTTAGAAAATGTGTGCTA 540
                                                                                                             cDRA Library Preparation. Life Technologies, Inc. clos hibrary Arrayed by: The I.M.A.G.E. Consortium (LLNL) bland sequencing by: Agencourt Hiosefence Corporation Close distribution: MGC close distribution and distribution information can be
                                                                                                                                                                                                                                                                                           National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalia; Eutheria; Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BM453724 Linear R
AGENCODE 6402713 NIH_NC7 72 WORD SAPIONS CINA CLOSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19.6%; Score 678; DB 13; Length 835; 100.0%; Pred. No. 1.9e-122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tound through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     137 g 233 t
                                                                                                                                                                                                                                                                                                                                                         **20 AAIIAAAIAAAAGCI-GGAAGCAAAGIAIAACC 3351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   http://image.llnl.gov
Plate: LLAM12206 row: e column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Average insert size 2 kb.
Technologies." 210 c 137 q 233 t
                                                                                                                                                                                                                                                                                                                                                                                                 721 ATTAAGATAAAAGCTGGGAAGCAAAGTATAAGC 753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cqapts.r.mail uih.g.w.
Tissue Procurement: ATCC/DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism-"Homo sapiens"
/db_aret-"taxon:9606"
/clone "IMAGE:5528814"
/clone_lib-"NIH_MCC_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               High quality sequence stop: 647. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NIH-Min http://man.ncl.nih.gov/
                                                                                                                                                                                                                                                                 24.5 ATTITACTATIGGAATCTGATATACTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19.00;
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BM454724.1 GI:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 835)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E #13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 678;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NOTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PESTLI 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHOPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BM454724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWHERES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T. I.I.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Z
Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                51,81
                                                                                                                                                                                                                                                                                                             Ê
                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                      -
```

```
EST 11-03T-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Edkaryota, Metabou, Chordatu, Graniata; Vertebrata; Edteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         603342335F1 NIH_MAY_90 Home sapires efnA elege iMA3E1540262_57, mRNA sequence.
                                                                                                                                                                                                                                                                     1866 TAAAAAACTGTATCAACTAACTAACTCTAAATACACTTTGTGAACGCCTTCTGT 1925
                                                                                                               1746 ATCTCCAAAGAAAAAGTTCAACTACGCGTGTAAATTCTACTGCAAATGCAGAGACACA 1805
                                                                                                                                                                                          1806 AGCAACCTCAGCCTCCAGACCCAGAAGCAITGAAATCTACCTCTTCACTGTTTA 1865
                                                                                                                                                                                                                                                                                                                                                2046 ATGCAAAGTGAAGAATATAGACCTTAAATTCAAAATCATAGTAACAGCATACAAGATCT 2105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2106 HOCHGARGCHGTHCAGGAGACATTGAAACRTGHTHSATGAAAGAGGAGTAFGAFTG 2165
                                    313 TAAAAAAGIGIAICGGCIAGCCIAICCCGGCIAAAIACACITIGIGAACGCCIICIGIC 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution in MGC clone distribution can be
73 TOTTATTAAAGAATGAAGGAGGGAGGAGCAAGIGATGAGGTTGAATGTGGTGGG 1+2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NIB'MGC http://mgc/nci-nih.gov/.
National Institutes of Bealth, Manmalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                             1986 STATGAANTOATGAGAGAGAGAALITGGACCAAAITATGATGTGTTCCATGIATGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               found through the I.M.A.G.E. Consortium/IJ.NI. at: http://image.llnl.gov
Plate: IJAM12026 row: k column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          672 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: cyapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BI868359.1 GI:16042032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LLL6 TOCITCOACCAGGGCCCC 1243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          673 IGCTTCCACCAGGCCCCC 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 672)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BI868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B1868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESS 10N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BI868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERS ION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUURCE
                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                           ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qγ
                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                9.
```

```
/note-"organ: liver: Vector: pCMV-SPORT6; Site_1: Not1; Site_2: Sall; Cloned unidirectionally; oliqo-dT primed. Average insert size 1.7 kb. Library enriched for full length clones and constructed by Life Technologies. Note: this is a NH-MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2867 CACTTGAAATGTTAGTCATTGTTATACAAGATTGAA-AATCTTGTGAAATCCTGC 2925
                                                                                                                                                                                                                                                                                                                                                                                    232/ ATATITCACCCTGAAGAGTCCATATAAAATTTCAGAAGGTCTGCCAACACGAAAAAA 2386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2387 IGACTOCAAGATOAAGATOTTAGTATOAATTGGTGAATCATTCGGGACTOTGAGAACT 2446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2447 TCCAGAAAATAAATCAGATGGTATGTAACAGGGACGGTGTGCTCAAAAGAAGTGCTGAAG 2506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2507 GANGGAACCTCCTAAACCACTGAAAAAACTACGCTTTGATATCGAAGGATCAGATGAAG 2566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2567 CAGATGGAAGTAAAGTGCCCAGGAGTCCAAATTTCAGGAGAAACTGGCAGAAATGA 2626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2627 CTFCTACTCGAACACGAATGGAAAAGCAGAAAATGAATGATAGGATAGGATACCTCGAAAAAA 2686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2687 AGGAAGAAGAAATGAGGATCTCAGGACCTTGGTGGACACTGTGTAGACGTCTGGATTCATT 2746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2747 GICTOTOACAGAIGIGACTGIALAACHTTGGCAGGTTCTGTTTATGGCCAGATTTAATAT 2806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2807 CTTCAGCTCTTTTGGGATATAAAAIGTGCAGGGAATTGTTTGGGTGATTGCTAGG 2866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2926 CALTTAAAAAGITGIAGCAGALIGITTCCTCTTGCAAAGIAAAATTGCTGTGTTTATGG 2985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601 CATTANANAGTIGITATIAN TIGHTIGITATIC CCTCTCCANAGTANANITGCTGTGCTTATATGG 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 TGACTCCAAGATCAAGAATCTTAGTATCAATTGGTGAATCATTCGGGACTTCTGAGAAGT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.21 GTCTCTCACAGATGTGACTGTAIAACTTTCCCCAGGTTCTGTTTATGGCCACATTTAATAT 480
                                                                                                                                                                                                                                                                                                                                           1; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                               1 ATATT FOACOOTGAAGAGTOCATATAAATTTTGAGAGGTCTGCCAACACGAGAAAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19.1%: Score 660; DB 13; Length 672;
99.9%; Pred. No. 6.4e-119;
tive 0; Mismatches 0; Ledels
            /elone "IMATE:5402622"
/elone_lib="NiH_MGC 90"
/fissue_lype="adenoearchoma, cell line"
                                                                                    /lab host-"DH10B (phage-resistant)"
/db xret "taxon:9606"
                                                                                                                                                                                                                                                                                                                                    Matches 671; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2986 ATAGTAAGAATG 2997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                661 ATAGLAAGAATG 672
                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                             Ouery Mateh
                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                  Z ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ==
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
```

Search completed: January 18, 2003, 04:09:18 Tob time : 3064.96 secs **-.**.



```
(without alignments)
7320.587 Million cell updates/sec
                                                                                                                                              January 17, 2003, 18:27:24; Search time 1984.45 Seconds
                                                                                                                                                                                                                                                                                               1 MPPKTPRKTAATAAAAAEP.....TRMCKGKMNDSMDTSNKEEK 897
                       Copyright (c) 1993 / 2003 Compugen Ltd.
                                                                                               nucleic search, using trame_plus_p2n model
Generate version 5.1.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16154066 seqs, 8097743376 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             betal number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                     Xqapop 10.0 , Xqapext
                                                                                                                                                                                                                                                                                                                                                                                               Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delevt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fost processing: Minimum Match 0%
Maximum Match 1909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                           US U9 026 459A 41
4631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB seq length: 0
                                                                                                                                                                                                                                              Diffe:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                Section table:
                                                                                               M protein
                                                                                                                                                                                                                                                                                                 Sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sear ched:
```

Listing first 45 summaries

Communed line parameters:
MoDEL-frame+ pin.model DEV xlh

U-frame+ pin.model DEV xlh

U-frame+ pin.model DEV xlh

U-frame+ pin.model DEV xlh

U-frame+ pin.model disperent 4 supermile | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.model | 100 pin.m

. Jedy to Sap_Me om qss mam:* *:SUM_SSP_M9 • word asp me •:u[d #:01d SSb_MM *: VIII em_qss fun: em_estfun:* em_estom:* +um_esthum: ★ em_estro:* em_estin:* db_est4:* em_estha:* em_estmu:* em_estov:* * . [disə=wə qb_est2:* th jest 1:* 2. 3. dr dss: em_qss स्था विष्ठ EST: Initiathasse :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

1000	Result		CHOLD				
	NO.	Score	Match	Match Length	<u> </u>	<u> </u>	Deserted ton
i							
		1710.5	36.9	1364	Ξ	AK011246	
	7	1551	33.5	1051	=	BM561083	~
	ŗ,	1448	31.3	а. Ж		80220275	
	₹ L	5 7 7	5.82 5.60 5.60 5.60 5.60 5.60 5.60 5.60 5.60	1001		BM475603	BM475603 AGENCOURT
	n y	# 0 V 0 C F	- 1	100		A::53/8:1	
	۰.	1208	90	0 ± 0 ∞	7	13M4 5 47 44	MODERATE ACENCEDRE
	œ	1111	24.0	1024		BM4 500 31	ISMA SOOR I AGENCYCLE
ย	5	1056 5	32.8	41.5		AA76.4411	
ರ	0:	1043	C. C.	792	9	Al.563757	ALCO 4757 ALSO 3757
		1037	÷.33	509		AL599644	
ن	77	1030	C	6.44	_ - ₹	BE082846,	BESSA 6 1072 BT064
	<u>~</u> ;	1016	21.9	623		AW584181	AW583181 iallh09.y
ن	4.	1013	21.9	871		AA76.4485	AA763485 vw54h01.r
	un e	1004	F	3.5	C4 :	BC25 354 4	
	<u>.</u>	92 / 50 50 / 50	21.1	28B	0 :	AW 468244	AW368234 CM3-B1018
	_ :	296	20.8	7.16		B1151568	
	8	± 100 100 100 100 100 100 100 100 100 10	20.7	594	0	AV715544	AV715534 AV715544
	5 ÷	955	9.00 07.00	დ დ 1	~ .	BG149050	
	50	947.5	20.5	7.14		BF144857	BF144857 601790444
	6	£. €.	전 : 0건 :		<u>ب</u>	ALC92790	Al.692736 DKF2p3131
	1 c		20 v	Ç4 (30 (. د	A1646048	A1646038 vw54a10.x
	, ,	B 0 0 0 0 0 0	2) : 5 (161	<u> </u>	HES 49278	BES 49278 601064567
	-1 C	2000	0.61	74 - 74 6 2) F	J .	ALIZOSAI	ALL 20041 DKD2p76.2D
	0.7	0 L	7 0 7 0	d	*) C	131.04.031. 170.44.000	13177678 C057474
ţ	,,	o or or or or	: u	100	4 -	100244000 000031036	1802-4-4-088
) t	1 C	2 2	. c	1 5	10	20 7 1 4 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5	01.3512.50 MRU-M101.01 01014.0000 0000
j	3 0	x	9 00	5.05 5.45 5.45 5.45 5.45 5.45 5.45 5.45	? ~	BM440416	
	30	824	17.8	493	0.1	AW502887	AWS02887 III - NF - HNO
	~ 1	815.5	17.6	14.0	م	AA672780	AA072780 mm76a05.1
	35	161	17.1	7.0%		A1646697	A1646097 VW54h07.X
	~	784	16.4	2083	~	HM456728	BM4%6728 AGENCOURT
	*4	751	16.2	453		AW503514	AW504514 UL HF BN0
	35	730.5	15.8	6.15	-	AA959836	AA959836 vw54h01.8
	3.6	708.5		1154		BM802736	BMB02746 AGENCOURT
c	3.7	583	14.7	4 38		BF827047	BP827047 RC3-IN002
	æ :	581.5		799		C82304	C82304 C82304 Leuk
	r :	965/		651	Ť ;	8169684	
	4 €	2.400.40 1.400.40	14.2	() () () () () () () () () () () () () () () () (AW45 1604	AW951604 EST3634674
	- :	٠,					
	14 c	* 60 V	\ . · · ·	4, 4		351283735 54040 55	
Ç	0 4	0.20 6.06		2 / 12	100	B1868353 BEA66546	BIRDRING POSSUZASO
. :	,	Ċυ		120	4 -	21 COOF 101	= :
c	د	د. ۲۲۹		œ.	_1	35.50	9TOND-ZWD 06185538

RESULT 1

AKO11246

LOCUS

LOCUS

AKO11246

AKO11246

AKO11246

BEFULLION MUS musculus 10 days embryo whole body cDNA, K.KEN Full length
enriched library, clone:2600012M22:relinoblastoma 1, full insert

ACCESSION AKO11246

VERSION AKO11246

VERSION AKO11246

VERSION AKO11246

AUS MUSCULUS (STATI:C57HL/AL) 10 days embryo cDNA to mKNA,

HIG: CAP Trapper.

MUS musculus (Strain:C57HL/6J) 10 days embryo cDNA to mKNA, clone_lib:RKEN Tull-length epriched mouse cDNA library clone:2600017M22.

Mus musculus Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Seiuroquathi; Muridue; Murinae; Mus.

ORGANISM

```
Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Kondo,H., Ckazaki,Y., Muramalsu,M. and Hayashizaki,Y. Ormalization and subtraction of cap-trapper-selected cDNAs to prepure Iull length cybn libraries for rapid discovery of new genes Genema Bes. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                           Shibata,K., Itoh,M., Alzawa,K., Naqaoka,S., Sasaki,N., Carninci,P., Khydman,J., Nishi,K., Kitsunai,T., Tashiro,H., Itoh,M., Sumi,N., Itshi,Y., Nakamura,S., Hazama,M., Nishino,H., Harda,A., Yamamoto,R., Matsumoto,H., Sakaguchi,S., Ikogami,T., Kashiwagi,K., Yolivake, T., Tozawa,Y., Tawa,M., Oha,T.F. Watshiwagi,K., Yolivake,Y., Ishikawa,T., Ozawa,K., Taraka,T., Matsunai,S., Kawai,J., Okazaki,Y., Huramatsu,M., Inoue,Y., Kira,A. and Hayashizaki,Y. Sequence and Hayashizaki,Y. Sequence and Hayashizaki,Y. Hayanina Sequence analysis (RFA) system—"M4-Lormai
                                               High-ettliciency tuil length oDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
99279253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nature 409 (6821), 685-590 (2001)
                      A sale of the distance of the property of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 1364)
                                                                                                                                10349636
                                                                                                                                                                                                                                                                                                               20199374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21085550
                                                                                                                                                                                                                                                                                                                                              11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11217851
                                                                                                                                PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTIL RS
T. N. LYKELY
                                                                                                 MEDLINE
                                                                                                                                                         T. N. SET THE
                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                  MEDILINE
                                                                                                                                                                                                                                                                                                                                                                    KEFEREN'E
                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     I - ORNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                           JOHNAL
                                                                                                                                                                                                                                                                                         HINA
                                                                                                                                                                                                                                                                                                                                              PUBME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Delta NAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTH RS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PUINMEL
                                               TITLE
                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    111.35
```

Kawai.J. Shinaqawa.A., Shibata.K., Yoshino,M., Itoh,M., Ishii,Y., Arakawa.T., Hara.A., Pubunishi,Y., Komno,H., Adachi,J., Pukuda,S., Arawa.M., Nishi.Y., Komno,H., Adachi,J., Pukuda,S., Airawa.M., Nishi.Y., Saito,H., Kasukawa.T., Saito,H., Kaduca,E., Yamanaka.J., Saito,F., Kigota,M., Kasukawa.T., Saito,H., Radenan,M., Gaagherland,T., Righi,P., Eswis,S., Matsuo,Y., Nikaido,J., Rochiwa,H., Kudis,S., Matsuo,Y., Nikaido,J., Pesole,G., Ouackenbush I. Schrimt I.M., Staubil,F., Suruti,R., Aono,H., Haldarchi,R., Barsh.G., Halako,J., Boffeli,D., Hojunga.M., Carninci,R., Harsh.G., Palako,J., Boffeli,D., Hojunga.M., Fletcher,C., Fujita,M., Garibold,M., Saito,M., Bull,C., Matchican,M., Hume,D., Kaming,J., Mazarchii,J., Mombacrts,P., Nordone,P., Matchican,L., Mashima,J., Mazarchii,J., Mombacrts,P., Nordone,P., Ringwald,M., Rodriguez,J., Sakanote,M., Sasaki,H., Sato,K., Schonbach,M., Rodriguez,J., Sakanote,M., Sasaki,H., Sato,K., Schonbach,C., Sey, Hillaker,C., Wilming,L., Masaki,H., Weltz,C., Whilliaker,C., Wilming,L., Machis, M., Weltz,C., Whilliaker,C., Wilming,L., Masaki,H., Weltz,C., Whilliaker,C., Wilming,L., Masaki, M., Weltz,C., Wilming,L., Waski, W., Gaski, M., Sasaki, H., Weltz,C., Walling,L., Waski, W., Gaski, M., Shang, K., Schonbach, S., Schonbach, S., Schonbach, S., Schonbach, S., Store, W., Storeh, R., Waski, M., Weltz,C., Whilliaker,C., Wilming,L., Waski, M., Weltz,C., Whilliaker,C., Wilming,L., Waski, W., Sasaki, W., Wasaki, W., Wasaki, W., Sasaki, W., Wasaki, W., Was Adachi.J. Alcawa. K. Akahira.S., Akimura.T., Acno.H., Arai.A., Arat.a. B. Hono.H. Hrwacstein, M. Hult.C., Arat.a. J. Pokuda.S., Enkunishi, V. Brituna, M. Hanagaki, T. Hara. A. Hayatsu, N. Hill, D. Hiramoto, K. Hiraoka, T. Hori.F. Hume.D., Imotani, K. Ishii, Y. Itoh, M. Izawa, M. Kasukawa, T. Hara. A. Hayatsu, N. Hill, Y. Itoh, M. Izawa, M. Kasukawa, T. Hara. H. Fawai, T. Konda, M. Koya, Y. Moreire, K. Kurinara Matsuyam, T. Mishi, Y. Nomeraki, P. Ohno, M. Akasaki, N. Namazaki, R. Sano, H. Sasaki, D. Salto, H. Saito, R. Saki, C. Sakai, K. Sano, H. Sasaki, D. Solabe, Y. Shibata, K. Shibata, Y. Shinaqawa, A. Shiraki, T. Solabe, Y. Suzuki, H. Taqama, M. Taqaza, A. Takabashi, T. Tanaka, T. Tejima, Y. Toya, T. Yamamaka, I. Yasunishi, A. Yoshida, K. Yoshino, M. Muramatsu, M. and Hayashizaki, Y. Dimission Physical and Chemical Pescarch (PIKEN). Laboratory for Genome Physical and Chemical Pescarch (PIKEN) Genomic Sciences Center (GSC). RIKEN Vokokama Institute, 7 22 Suchizo cho, Tsarami, Nu, Yokohama, Kanadawa 230-0045, Japan (E-mailigenome-reseigsc.riken.go.jp, UKL:http://genome-gsc.riken.go.jp, Tril-R1-45-593-9222. Wynshaw-Boris. A., Yoshida. K., Haseqawa. Y., Kawaji, H., Kohlauki, S. and Hayashizaki, Y. Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Functional annotation of a full-length mouse cDNA collection

JOURNAL.

```
/clone_lib-"RikEn full-length enriched mouse cona library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RTCELIYLTQPSSALSTEINSMLVLKISWITFLLAKGEVLUMEDDLVISFULMICVVD
YFIKFSPPALLKEFYKTAALPINGSPRTPRKGGNKSARIAKOLENDIN I I I I VILGNEHE
GNIDEVKNVYFKNFIPFINSLGIVSSNGLPEVESLSKRYEEVYLKNKDLDARLFIDHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DIDEMPETFTELQKSIETSVYKFFDLLKEIDTSTKVDNAMSRLLKKYNVLCALYSKLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KTLQTDPIDSFETERTPRKNNPDEEANVYTPHTPVRTVMNIGQUMVILNSASDQPSE
NLISYENNCTVNP"
                                                                                                                                                                           cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN.
                                              then we will our weak site (bright) get we gave the eq. (b. ) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        193 cristican de regimente de regimente de de de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia de la consequencia dela consequencia della 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            253 (ABSTGO) OF BOOT FOR STITING AND A STORY OF STATISTICS AND STORY OF STATISTICS AND STORY OF STATISTICS AND STORY OF STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATISTICS AND STATIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21 ProAlaProFroFroProProFroSludiaAspFrodluGlnAspSerdlyFroGlu 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41 AspheuProbeuValArgLeuCluPhecluGluThr@luGluProAspPhechralaten 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note-"data source:MCD, source key:MGI:97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 TysGlnLysLeulyslieProAspHisValArqsluArgAlaTrpLeur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23.55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xrof-_rANIOM_DB.2600017M22*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /dev_stage="10 days embryo"
1. .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     346 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="MGD:MGI:1905260"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /protein_id="BAB27493.1"
/db_xrof="G::12847244"
/db_xrof="MGD:MGI:97874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-026-459A-41 (1-897) x AK011246 (1-1364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              307 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /strain-"C578L/6J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone-"2609017M21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start.-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              evidence: 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /qene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .>1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1710.50
R6 59%
Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     306 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80.498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            36.948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         putative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Host: SOLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sonrce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     לפונכ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                           LAUMWOO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Prod.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               님
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
```

```
214 AAMMIGAAGAAGGAAAAGGAATAAGGAAAAGGAAAGAATTAAGAATT1272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1274 ACTATTCACACAATTAATGGTGATTTTAAATTCTGCAAGTGATCAGGCGATCAGAAAATGTG 1332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    974 CACCAGIGIAATALAGAIGAGGIGAAAATGIITATTICAAAAATTTTAICCTTTTATA 1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 150 | | HeSerThrühulleAsuSerAlaLeuValLeuLysValSerTrpIleThrPheLeuLeu | 169 | | 152 | | 153 | 154 | 154 | 155 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     290 lyroluGlulleTyrLeuLysAsnLysAspLeuAspAlaArgLeuPheLeuAspHisAsp 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                330 AsuleuAsp6lutluValAsuVallleProProHisThrProValArqThrValMetAsn 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             450 ThrilodindintenMetMetHeleuAsnSerAlaSerAspGlnProSerGluAsnLeu 369
110 sorthriysValAspAsnAlaMotSorArqLeuLguLysLysTyrAspValLcuPhcAla 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       55.4 AGTACCAAGGIIGAIAATGCIATGICAAGACTAITGAAGAAGIATAAIGIGITAIGIGCA 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           140 LeutheSertysLeuGluArgThrCysGluLeuTleTyrLeuThrGlnProSerSerSer 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               170 AlalysolydluVallaudlnMetGluAspAspLeuVallleSerPhedlnLeuMetLeu 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     190 CysValleuAsplyrPhelleLysLeuSerProProMetLeuLeuLysGluProTyrLys 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  210 ThrAlaValileProlleAsnGlySerProArgThrProArgArgGlyGlnAsnArgSer 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    250 HisoluCysAsulleAspCluVallysAsnValTyrphelysAsuberlePrePbGMet 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   270 AsuSertauGlyLauValThrSerAsnGlyLauProGluValGluAsuLauSerLysArg 289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   410 LysThrLeuGLiThrAspSerTLeAspSerPheGlufhi@luArgThrProArgLysSer 329
                                                                                                  ValAspleuAspGluMetSerPheThrPheThrGluLeu 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1113 ALLOCHACHICAAIAAFIGTACAGAAL 1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          470 ileserTyrPheAsnAsnCysThrValAsn 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 2
    Ē
                                                                                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.0
                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
```

```
ionally. Primer: Oligo dT.
Liktar, constructed by Life
                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo,
                                                                                                                                                                                                                                                                                                           cbwn Library Preparation: Lite Technologies, Inc. cbw Library Arrayed by: The LW.A.6. Consortium (LLNL.) MAN Sequencing by: Agencourt Hosertence Corporation Clone distribution: MGC clone distribution information can be found through the LW.A.G.E. Consortium/LLNL at:
Plate: LLAM12263 row. m column: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note-"organ: eye; Vector: pCMV SFORIS: Site 1: Not1:
Site, 2: Sall; Cloned unidirectionally. Primer: Olido
Aversag: insert size 1.75 Mt. Librat, constructed by
Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RIB M65 Attp.//mor.mci.nih.gov/.
National Institutes of Health, Mammallan Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           402 AlaValSIyCInGlyCysValCluffeGlySerCInArqTyrtysLeuGlyVafArgton 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 422 TyrTyrArqValMetGluSerMetLeuLysSerGluGluGluArqLeuSerlleGluAsn 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64 TATTACCGAGTAATGGAATCCATGCTTAAATCAGAAGAAGAAGATTATTAATTCALTCATTCAAAAT 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 442 PheserLysLeuLeuAsnAspAsnIlePheHisMetSetLeuLeuAlarysAlaLeuGlu 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       482 SerPheProTrpIleLeuAsnValLeuAsnIserLysAlaPheAspPheTyrLysVallile 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      502 GluSerPhelleLysAladluGlyAsnLeuThrArqGluMetTleLysHisLeudluArq 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 GCTGTGGGACAGGGTTGTGTCGCAAATTGGATCACAGCGATACAAACTTGGAGTTCGCTTG 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    462 ValValMetAlaThrTyrSerArqSerThrSerGlnAsnLeuAspSerGlyThrAspLen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="retinoblastoma"
/lab_host="DH10H (phage resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo_sapiens"
/db_xrel="taxon:9606"
/clone="IMAGE:5550905"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-026-459A-41 (1-897) x BM561083 (1-1051)
                                                                                                                                                                                                                                                Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib-"NIH_MGC_67"
                                                                                                                                                                                                                                                                                                                                                                                                                                                        High quality sequence stop: 747.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            197 q
                                                                                                                                                                                                                                                                   Email: eqapbs remail.rih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualitiers
                                     BM561083.1 GI:18806043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1,77e-140
1551.00
93,268
91,508
33,498
                                                                                                                                                               (bases 1 to 1051)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 122
                                                                                                                                                                                                                          Unpublished (1994)
5', mRNA sequence.
BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . 1051
                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Persont Similarity
                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fred. No.:
                                                                                                    ORGANISM
                                                                                                                                                                                  AUTHORS
TITLE
                   ACCESSION
                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                            JOHNNAL.
                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                         VERSION
                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       οχ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
```

522 CysCluHisArgIleMetGluSerLeuAlalrpLeuSerAspSerProLeuPheAspLeu 541

õ

Leius HM551093 105-FEH-2002 DEFINITION AGENCOURT, 656613 NIH, MGC_67 Homo sapiens couna clone IMAGR: 5550905

RM561083

```
B0220275 881 bp mRNA linear EST 02-MAY-2002
AGENCOURT_7572621 B1H_MGC_92 Home sapiers cluA clube IMAGE 6044522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukarvota: Metazoa: Chordata: Craniata: Vettebrata: Euteleustomi;
Mammalia: Eutheria: Primates: Catarrhini; Hominidae: Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CONA Library Preparation: Life Technologies, Inc. CONA Library Arrayrd by The TM A C P Consertium (LINE) DNA Sequencing by Agenceurt Hisselence Corporation Clone distribution: Mac clone distribution: Mac clone distribution information can be from through the LM.A.G.E. Consortium/LENL at:
                                                                                                                                       (42) (161)ysClnSertysAspArgGluGlyDroThrAspHisLouGluSerAlaCystroLeu 561)
                                                                                                124 ATTAMACAATCAAAGAOOGAAAAAAGAAOOAAOTGATGAOOTTGAATOTGGTTGATOTT 483
                                                                                                                                                                                                                                                                                                      783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82 ProlyolystystystystathrAraValAsnSerThrAlaAsnAlaGluThrGlnAla 691
                                                                                                                                                                                                                                              6.22 LysValTyrArqLeuAlaTyrLeuArqLeuAsnThrLeuCysGluArqLeuLeuSerGlu 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         642 HisProdluLeuGluHisTleIleTrpThrLeuPheGlnHisThrLeuGlnAsnGluTyr 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               284 GAACTGATGAGAAAAAACANTTTGAAAAAAATATGATGTTAGATGTATGGATATGG 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     682 (93V)(98AsalloAgr LongysPhelysIlefleValThrAlaTyrLysAsptouRz 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 881)
NIH-MGC http://mgc.nci.nih.qov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PhoTyrashSorValPheMetG'rangles/ysThrashIL 737
7.24 CACCCAGAATTAGAACATATCATCTGGACCTTTTCCAGCACACACGCAGAATGAGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plate: LLAM13287 row: e column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
Email: cqapbs rémail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop: 690. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BQ220275.1 GI.20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , mPNA sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . (FAU. 1011 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CONTROS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NOT : IN LAKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             * 1 H544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HU221..75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FLATERES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 : MME.N.I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          XE: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
```

/organism-"Homo sapiens"

```
/db_xref="taxon:9606"
/clone="IndAE:6044522"
/clone=lib="NH=MGC_92"
/tissuc_type="tehbryonal carcinoma, cell line"
/tissuc_type="tehbryonal carcinoma, cell line"
/tissuc_type="tehbryonal carcinoma"
/note="corgan: testls; Vector: pCWV-SporT6; Site_1: NotI;
Site_2: Sall; cloned unidirectionally, clino-Irimed.
Average insett size 2.5 kb. Library enriched for full-length clones and constructed by Life Technologies.
| Note: this is a NH=MCC_library." | Note: this is a NH=MCC_library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       177 MetGluAspAspLeuValIleSerPheGlnLeuMetLeuCysValLeuAspTyrFheIle 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    417 LeuGlyValArqLeuTyrTyrArqValMerGluSerMetLeuLysSerGluGluGludluArq 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              217 GlySerFroArgThrFroArgArgGlyGlnAsnArgSerAlaArglieAlaLySGlnLea 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               123 GÉTTICACCTROBACHARGROGAGGACHARANAGGAGGAGGGATAGGAAAAGAAGTA 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       317 lleAspSerPheGluThrGlnArgThrProArglysSerAsnLeuAspGluGluValAsn 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  357 IleLeuAsnSerAlaSerAspGlnProSerGluAsnLeuIleSerTyrFheAsnAsnCys 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        603 AFAGTGAATCPAAAGAAAGTATACTGAAAAGAGGATGTAGATATAGGATACATCTTTAAA 662
                                                                                                                                                                                                                                                                                                                                                                                                                       303 TCTAATGGACTTCCAGAGGTTGAAAATCTTTCTAAAGGATAGGAAAAATTTALCTTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              337 ValileProProfitsThrProValArgThrValMetAsnIhrIleGlnGlnLeuMetMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        297 AsslysAspLeuAspAlaArqLeuPhcLeuAspHisAspLysThrLeuGlnThrAspSer
                                                                                                                                                                                                                                                                               Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                    US-09-026-459A-41 (1-897) x BQ220275 (1-881)
                                                                                                                                                                                                                                              1.5e-130
1448.00
98.30%
97.96%
                                                                                                                                                                                                                                                                                                                   31.278
                                                                                                                                                                                                                                                                                                   Local Similarity:
                                                                                                                                                                            313 a
                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                   Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ę.
                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>ت</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Op
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  占
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
```

13.

1+7

26.4

10

```
EST (Poustka, A., Wellenreuther, R., Mewes, H.W., Weil, B. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Poustka, A., Wellenreuther, R., Mewes, H.W., Weil, B. and Wiemann, S.).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryola, Metazoa, Chordata: Craniata; Vertebrata, Euteleostomi;
Mammalia, Eutheria, Primates, Cataribini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                       223 qArqdlyGluAsaArqSexAlaArqTleAlaEyssHahrasHahlaHarlHardHardHardHard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             458 TGAAGTICICIGIAAAGAACAIGAAIGIAAIAIAGAIGAGGGGAAAAAIGITTATITCAA 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           398 GCGAGGTCAGAACAGGAGTGTAGTAGTAAAAAAATAATAGAAAATTAT 457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    578 ITGAAAATCTTTCTAAACGATACGAAGAAATTTATGTTAAAAATAAAGATCTTAGAAGGGAAGTGSAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           303 grouphet.cuAspHisAspt.ysThrt.euGluThrAspSerifeAspSerPhetIuThrt1 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        323 nArgThrProArgLysSerAsnLeuAsp61uG1uVa1AsnVa111eProProBisThrPr 343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              963 pGlathroSergluAsriculle Serfyr PhcAshAshCysThrVal AshBrutgsCl 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       882 uScrifeLeufysArg······VallysAspileGlyfyille·····Phetyshillys - 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          727 bp mRNA linear EST 14 AUG
DEF2p3l390816_r1 313 (synonym: hlee2) Home sapiens cDNA clone
AES9881
                                                                                  158 GACACCCAGCAGCAGTTCCATATCTACTGAATAAATTCTGCATTGCTCTTAAAAGTTTC
                                                                                                                                                                                              183 eSerPheGlnLeuMetLeuCysValLeuAspTyrPhelleLysLeuSerProProMetLe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               283 IGluAsnLeuSerLysAraTyrGluGlulleTyrLeuLysAsnLysAspLeuAspAlaAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         343 oValArqThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAldSerAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AL597811.1 GI:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PheAlaLysAlaValGly 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        938 TTCTGGCTAAAAGGCTTGGGG 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Poustka A.J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCHISSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                ò.
                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>a</u>
                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ៊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \tilde{\epsilon}_i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                               EST 05-FFH-2002
                                                                                                                                                                                                                                                                                                                                                         ACENCOURT, 6480007 NTH_MCC_92 Homo sapiens cons clone IMAGE:5575683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="embryonal carcinoma, cell line"
/lab_bost="DBLOB phage resistant)"
//ab_bost="DBLOB phage resistant)"
//ab_coran. testis: Vertor: pGMV SFORF6: Site_1: Not1;
//ab_coran. testis: Vertor: pGMV SFORF6: Site_1: Not1;
//ab_coran. testis: Vertor: pGMV SFORF6: Site_1: Not1;
//ab_coran. testis: Vertor: pGMV SFORF6: Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: Vertor: pGMV STORE Site_1: Not1;
//ab_coran. testis: vertor: pgmV STORE Site_1: Not1;
//ab_coran. testis: vertor: pgmV STORE Site_1: Not1;
//ab_coran. testis: vertor: pgmV STORE Site_1: Not1;
//ab_coran. testis: vertor: pgmV STORE Site_1: Not1;
//ab_coran. testis: pgmV STORE Site_1: pgmV ST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Enkaryoja, Metazoa: Chordala, Craniala; Vertebrala, Euteleostomi;
Mammalia: Entheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  124 TyrAspValLeuPheAlaLeuPheSerLysLeu-GluArqThrCysGluLeuIleTyrLe 143 、
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MCC clone distribution information can be fromed trough the T.M.A.G.E. Consortium/LIAL at. http://maae.lln.qov Plate: Liamle 286 row: f column: 04 High quality sequence stop: 744.
7.2.3 CELOGAGI EGGELEGEALTACEGAGTAATEGAA EGCATECHTAAA FEAGAAAGAGGA 782
                                                    447 LeuserlieGlnAsnPheSerLysLeuLeuAsnAspAsnIle·PheHisMet.Ser-LeuL, 456
                                                                               PHILLIHHIHHIHHIHHHHHHHHHHHHHHHHH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIH MSC http://mgc nei nih qov/
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   104 JoulysClaileAspThrSerThr[ysVa]AspAsnAlaMed SerArdLeuLysLys 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98 TATGATGTATGTTTGGACTCTTCAGGAAATTCGGAAAGGACACGTGAACTTATATATTT 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         143 uthrehnprosersersertleserthistuffedsnseralaheuValleutysValSe 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        88 GTO GAGTAATTGATACCAGTACCAGTICALAATGCTATGTCAAGACTGTTGAAGAAG 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA Library Preparation: Life Technologies, Inc. CONA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1001
281
10
10
5
                                                                                                                                                                 456 cuAlaCysAlaLcuGluValValMctAlaThrTyrScr 468
                                                                                                                                                                                              Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                     HKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           dS 09 026 459A 41 (1-897) x BM475603 (1-1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "59_ONLHIN"-411 Ontoloo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db xret "taxon:9606"
/clone="!MAGE:5575683"
                                                                                                                                                                                                                                                                                                                            1001 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: eqapbs remail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Localion/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    186 q
                                                                                                                                                                                                                                                                                                                                                                                                                                              BM475603.1 GI:18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7.716 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1349,00
94,87%
90 65%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    178 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28.91%
                                                                                                                                                                                                                                                                                                                                                                                 5', mRNA sequence.
BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Level Similarity:
                                                                                                                                                                                                                                                                                                                                  MM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alliquiment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             - RUANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                 ACT PSST PON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ALLHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LITTE
JESTRNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PEFERENCE
                                                                                                                                                                                                                                                                          PESULI 4
                                                                                                                                                                                                                                                                                                     RM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : MME:NI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1000
                                                                                                                                                                                                                                                                                                                                  100,40%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
```

EST 14 AUG 2001

817

36.4

```
Heidelberg/Cermany) within the coNA sequencing consertium of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Thate "Wester FILTPIEXE, Site_1 SCLIA, SCHE_2 SLIB, CDNA, collection"
                                                                                                                                                                                                                                                                                                    Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DREZ), Email s.wiemann@dkfz. heidelberg.de;
sequenced by DREZ (German Cancer Research Center,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Please contact the ETPL Pessententen, Hitherwood (, 14979)
Berlin Charlottenburg, GURMANY, Email: clone@rzpd.de.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ALE GysSer Daser LeuSer Leubergy Egystyssys Pyrarglea Alamyr Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuberg Leuber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              712 LeullelysGluGlaGluTyrAspSerIleIleValPheTyrAspSerValPheMetGln 731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 532 AsnThrien/ysdluArqieuLeuSerdluHisProdluLeuGluHisIletLeTrpThr 651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     52 LeuPhedlnHisThrLeuGlnAsnGluTyrGluLeuMetArqAspArqHisLeuAspGln 671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      122 CITTECTAGENTATOTAGATGAGTATGAACTCATGAGAGACACATTTGGACCAA 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ↔ TIGATOAAAGAAAAAGGAATATGATTCTATTATAGTATTCTATAACTGGGTCTTCATGCAG 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  732 Anglost yethrasellotondistyralaSerthrangProProProPropertogSererolle 751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            752 ProfilsIleProArqSerProTyrLysPheProSerSerProLeuArqIleProGlyGly 771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No st sequence available.
This clone (DKFZp31300816) is available at the RZPD in Berlin.
                           Max-Planck-Institute for Molecular Genetics
thmestrasse 73, 14195 Rerlin, Germany
                                                                                                                                                                                                                                                                    sequence of the clone insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /olono-mokPyp313c0816"
/olono lib-"313 (synonym: bloc2)"
/dov_stage-"adult"
                                                                                                                                                                                                                 Email: poustkadmpime-berlin-dahlem.mpq.de
This is the 5' sequence of the clone inser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      130 g 198 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism-"Homo sapiens"
/db_xret-"+axon.94604"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US 09 026-459A-41 (1-897) x AL597811 (1-727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zlab_host-"DHlOB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9 27-112
1254.00
99.598
99.598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         German Genome Project.
                                                                                                               +49-30-84131623
                                                                                                                                                                       .49-30-84131128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      161 c
Department Lehrach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27.08%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hest Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOTIOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ξ
Σ
Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ę.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
```

```
BQ222227
AGRNCOUFT_7566645 NIH_MGC_92 Homo sapiens CDNA clone IMAGE:6644563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone_lib="NHH_MOC_92"
/tissuc_type="cathryonal cat.inoma, cell line"
/tasuc_type="cathryonal cat.inoma, cell line"
/tab_most="nHib" (phage-resistant)
/mule="organ testis, Vector, pGWA SPORIS, Site_i: Noti:
Site_2: Sall: Cloned unidirectionally: oliqo-dI primed.
Average Insert.size 2.5 kb. Librat, emilhed for full-length clones and constructed by Lite Technologies.
full-length clones and constructed by Lite Technologies.
Note: this is a NHH_MCC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA Sequencing by: Agenceurt Bioscience Corporation
Clone distribution: MCC clone distribution information can be
found through the 1.M.A.G.E. Consortium/LLNL at:
http://imaqellnl.gov
Plate: LLMM13279 row: i column: 20
High quality sequence stop: 606.
                                                                        792 ThrigsMetThrProArgSerArg11eLeuValSer11eS1g3luSerTheS1g1hrSer 811
                                                                                                                                              812 GluLysPheGlnLysIleAsnGlnMetValCysAsnSerAspArqValLeuLysArqSer 831
                                                                                                                                                                    Mational Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 126 ValleuPheAlaLeuDheSerLysLeuGluAraThrCysGluLeuIleTyrLeuThrGlu 145
482 AACATCTATATTCACCCCTGAAGAGICCATATAAAA111CAGAAGGICTGCCAACACCA 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US 09 026 459A·41 (1:897) X BQ222227 (1-880)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 880)
NIH-MGC http://mqc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone "IMAGE: 6041563"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xre1-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8gazzzz7.1 GI.20403627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6.27e-110
1236.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5', mRNA sequence.
BQ222227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               800 CD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity.
                                                                                                                                                                                                                                                                                                                                      852 AspGlu 853
                                                                                                                                                                                                                                                                                                                                                                                      722 CATCAA 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NOT LINITED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                         BQ222277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ! COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.0008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pest
                                                                                                                                                                                                                                                                                       ä
                                                                                                                                                ò
                                                                                                                                                                                                                                          Š
```

```
mRNA linear EST 05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGENCOURT 6402744 NIB_MGC_72 Homo sapiens CDNA clone IMAGE:5528814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryola: Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Primates; Catarrbiri; Howin;dae; Home.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    346 ThrValMerAshFhr HeGlndInLeuMetMet HeleuAshSerAlaSerAspGln-Pr 365 ×
                                           146 ProserSerSerTleSerThrolulleAsnSerAlaLeuValLeuLysValSerTrpIle 165
                                                                                                                                                                               121 ACATTTTTATTAGCTAAAGGGGAAAGTATTACAAATGGAAGATGTGGTGGTGATTTGATTT 180
                                                                                                                                                                                                                                                                                                                      206 CluProTyrLysTh:AlaVallleProlleAssGlySerProArgThrFroArgArgGly 225
                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                               226 ChrAsnArqSerAlaArqTTeAlaLysChnLeuGluAsnAspThrArqTTeTTeGLuVal 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                           401 PAGAACAGGAAGTGCACGGATAGGAAACAACTAGAAAATGATAGAAATTATTGAAGTT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      461 CTCLCHAAAGAACATGAATGTAATATAGATGAGAGAAAATGTTTGAAAAATTTTT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421 ATACCITITATGANITCTCITITGGACITGIAACAICITAATGGACITCCAGAGGITGAAAAI 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481 CITTCTAAACGATACGAAAAITTATCTTAAAAATAAAGATCTAGAIGCAAGATTATTT 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    406 LeuAspHisAspLysThrLeuGlnThrAspSerIleAspSerPheGluThrGlnArgThr 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            326 ProArqLysSerAsnLeuAspGluGluValAsnVallleProProHisThrProValArg 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601 CONCOADADAGTANCCTTGATGANGGTGAATGTAATTCCTCCACACACTCCAGTTAGG 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661 ACTORIALGANCACIATO ANCALLANIGATITITANATOCAGCANGIGANCANCO 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          465 oSeroluAsuLeufle SerTyrPheAsuAsuCysThrValAsu- 'ProLysGluSerI 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7.21 (1) 2AAAAAA (C) GATTTT O'T ALITTAACCAGG) GCAGGGAAH GCGAAAAGAAAGT 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NIH MGC http://mec'ncinih.gov/
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                         61 CCGAGGAGITGSATATCTA, FGAAATAAATTCTGGATTGGTGCTAAAAGTTTGTTGGATG 120
1 STATEGET EGMATOTEMAGMAATEGMAAAGGAMATGEGAAGTEATETEGAMAAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TysArqValLysAspIleGlyTyrIlePhe ----LysGluLysPhe 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 186 GluteuMetteudysValtemAspTyrPbelletysLeuSerProProMetteuLeuLys
                                                                                                                                                                                                                                                        166 Thr Phetanton AlatyschychuValton ChuMet ChuAspAspheu Valt Fleser Phe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  266 [LebroPheMetAsuSerfen3tyLebValThrSerAsu3tyLebPo3tbVal3thAsu
                                                                                                                                                          Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             845 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BM454724.1 G1:18552764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l (bases 1 to 835)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14M4 1. 1. 1.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PEGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACT ESSETON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JUNEAN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEFERENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KLYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESIDE /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MM45.1724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N. H.S. L. N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        111.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3. MHe S
                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ÷
                                                                                      4
                                                                                                                                      2
                                                                                                                                                                             Ē
                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                               Ē
                                                                                                                                                                                                                                                                                                                                                                                                               \geq
                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
```

Email: eqapbs rimail.nih.gov Tissue Procurement: A1907DFID/DEP

```
Zhole-"Orqan: skin: Weeton: p/WV Spadff; Site, 1: Not1; Site_2: Sall; Cloned uniditectionally. Primet: oliqo di Averaci baset size 2 kb. Library constructed by Liteliechnologies.
cona Library Fregaration: Dife Technologies, Inc. (DNA Library Arrayed by: The L.M.A.S. Consortion (LLNL) by Sequencing by: Agencourt Bioscience Corporation Cloum distribution: MGC cloum distribution information on betound through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6.18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    539 LeuSerGluHisProGluLeuGluHisIlelleTrpIhrLeuPheGluHisThrLeuGln 658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       659 AsudlufyrdfuleumetaraAsparqHislæaAspdlillemetmeteysglimetlyr 678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      £.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       188 INGGATATOGAAAG IGAAGAATALAGAGGI (AAA) INAAAATIGALIGI AANANALANAAGI 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         699 AspLeuProHisAlaValGlnGluThrPheLysAraValLeuIleLysGluGluGluGluTyr 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8 GTCCGACGALGTGAACATCGAATCATGGAALCCCTTGCATGGCTCTCAGALLCACCTTTA 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        579 ValArqSerProLysLysLysGlySerThrThrArqValAsnSerThrAlaAsnAlaGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  539 PheAsplieufleLysGlnSerLysAspArgGluGlyProThrAspHisLenGluSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         559 CysProLeuAsnLeuProLeuGlnAsnAsnHisThrAlaAlaAspMetlyrLeuSerPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            599 ThrGInAlaThrSerAlaPheGluthrGInLysProtoutysSerThrSerTemSerTHIII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            248 ACACAAGGAAGCTCAGGCTTGCAGAGCCAAGAGCCAIGGAAATGTACCTCTCTTTCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              619 PheTyrt.ystysVallyrArgkeuAlalyrtkeuArgleuAshihnleudyschuArgkeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  679 ClyllcCystysValtysAsulteAspteutysPhetysTletTeValthrAlatyrtys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   188 GTAAGATGTGGAAAGAAAAAGGTTGAAGTAGGGGTGTAAATTGTAGTGGAAATGGAAAG
                                                                                                                                                                                                                                                                                                                                                                       1 of hers
                                                                                                                                                                                                                                                                                                                                                                                                                                                              244
                                                                                                                                                                                                                                    /cionc_lib="NIH_MGC_72"
/tissue_type="melanotic melanoma"
/lab_host="DHIOB (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                   137 q 233 1
                                                                                          http://image.llnl.gov
Plate: LLAM12206 row: e column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                               Londt h:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    indels:
                                                                                                                                                                                    /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-026-459A-41 (1-897) x BM453724 (1-835)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Caps
                                                                                                                                                                                                    /db_xref-"taxon:9606"
/clone-"IMAGE:5528814"
                                                                                                                                High quality sequence stop: 647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifièrs
                                                                                                                                                                                                                                                                                                                                                                                                                                             3.480-107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1208.00
                                                                                                                                                                                                                                                                                                                                                                     210 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               92.91%
91.04%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26.098
                                                                                                                                                               1. .845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                     SOUFCE
                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   چ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
```

```
BM450031 1023 bp mRNA linear EST 05-PEB-2002 AGFNPY TPT_C394544 NIH_MY2_2 HTMT STPPOMS TRNA ALGE IMAGE STRANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone_lib="NIH_MGC_72"
//issue_type="malanoric melanoma"
//issue_type="malanoric melanoma"
//issue_type="malanoric melanoma"
//issue_type="malanoric melanoma"
//issue_type="malanoric melanoma"
//issue_type="malanoric melanoma"
//issue_type="malanoric melanoric mela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Euthoria, Drimafos, Catarrhini, Hominidae, Hemo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CENA Library Preparation: Life Technologics, incords Library Arrayed by: The Limit G.E. Consortium (LLNL)
DNA Sequencing by Amencourt Bioscience Corporation
Clone distribution. MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         739 AspserllelleValPheTyrAsuserValPheMetGlnArqLeuLysThrAsnIleLeu 738
                                                                    *. 8 GALICIALIARATATETATAGEGGETTECATGCAGAGAGTGAAAAAATATTTG 667
                                                                                                                                                                                                                                                                  7.9 SIRITIALASETTATAGETOPTO ThricuserProffeProffstle-Proargse 757
                                                                                                                                                                                                                                                                                                                               THEFTHEFT HITTELLIFIE THE THEFT TO A STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              747 Pholyrlys---PhoProSetSetProLeu---ArgilePro---GlyGlyAsn---- 772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 1023)
NIH-MGC http://mgr nri nih grw/
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  702 HisAlaVal@lnGluThrPbeLysArqValLeuIleLysGluGluGluGluTyrAspSerIle 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          found through the L.M.A.G.E. Consortium/LLNL at: http://image.ilml.gov
Plife: LLAM12204 rew: d column: 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      281 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lengt.h:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              lissue Procurement: Alcc/DCID/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism-"Homo sapiens"
/db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US 07-026-459A 41 (1-897) x BM450031 (1-1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone="IMAGE-5528037"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      High quality sequence stop: 643.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Localion Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               197 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "14 -IleTyrIleSerProLeuLys 779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    788 LAIATITTTCAACCCCCTGCAA 809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HM450031.1 GI:18499071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1111.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.350 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23.99%
13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hest Loval Similarity:
Onery Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5', mRNA
BM450031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0011108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LFFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A. CESSIII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J. CRENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KFYWorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KESEE I R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HM4 5000 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N.IMW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E PREZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NET CINC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               111000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HAKE
```

```
AA763411 Soares_mammary_qland_NNLMG Mus musculus cDNA clone VAS40404.1 Soares_mammary_qland_NNLMG Mus musculus cDNA clone IMARE-1347968 5' similor open PETTS WINGOOD PETTS WINGOOD PETTS WINGOOD PETTS WINGOOD PROTECT PROTEIN (HUMMAN); gb:M26391 Mouse retinoblastoma susceptibility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
Geisel,S., Kuraba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Steptoe,M., Steptoe,M., Fan,F., Underwood,K., Moore,H.,
Theising,H., Wylie,T., Lennon,G., Soares,H., Wilson,R. and
Waterston,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia, Eutheria, Eudentia, Scieregnathi; Muridae; Murinae; Mus.
1 (bases 1 to 914)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fukatyuta, Metazean Chordata, Graniata, Vertebrata, Buteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This close is anallable rogalty free through LLNL; contact the IMAGE Consortium (infolmage.llnl.gov) for further information.
                                                                                                                                                                                                                                       722 HevalihetyrasnServalihemetGlnargicciysthrasnideteocliniyrala 741
                                                                                                                                                       742 SerThrArgProProThrLeuSerProlleProHisIleProArgSerProTyrLysPhe 761
                                                                                                                                                                              782 TyrtyslleSerGlaGlyLcuProThrProThrtysMetThrProArgSerArg11eLou 801
                                                                                                                                                                                                                                                                                                                                                        842 lystysteuArgPheAsptleGluGlySerAspClaAlaAspClySertysHisteuPro 861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  862 GlyGluSerLysPheGlnGlnLysLeuAlaGluMetThrSerThrArqThrArdMetGln 881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4444 Forest Park Parkway, Hox 850°, St. Louis, Mc 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                602 AAGCASAAAAISAAIGAIAGGAIAGGAIACCICAAACAAGGAAGAAA 649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       882 LysGluLysMetAssAsySerMetAspThrSerAssLysGluGluLys 897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WashU-HHMI Mouse EST Project
Washington University School of MedicineP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seq primer: -28ml3 rev2 EI 1rom Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact, Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The WashU-HHMI Mouse EST Project Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein (MOUSE),, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         High quality sequence stop: 422.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA763411 GI:2813158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MCT:661286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CRGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA763411/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                  , 0y
                                                                                                           q
                                                                οy
                                                                                                                                                                                              q∩ :
                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                        급
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    윤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
```

```
Another Posts with the Manager (Pharmacia) with a modified polylinker; 1st strand cDNA was prepared from mammary dand tissue from a lactafing fromed. The was then primed with a Not 1 - Olique(H) primer, Doubler stranded cDNA was 194ated to Eco RI adaptors (Pharmacia), digested with Not I and Eco RI sites of the modified pT7T3 v.t.e.. Library is nothalized. Library was constitued by Bento Soares and M. Palima Bonaldo."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             425 ThrProArqLysSerAsnLeuAspGluGluGluValAsnValIleProProHisThrProVal 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              856. APPPPARAMAAAAPCAMPPITOT GAAGOGCGAAARCGGGGTTACHGGGGGGGGGGGGTT 798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    797 TGGGCTGTTTTGGAACCTATCGAACAATTTATTGTGATTTTAAACTGGGGAATGACGGC 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.25 ValMet&luSerMetLeulysSerGluGluGluArqLeuSerTleGlnAsnPheSerLys 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    562 GEGATGGAATCCATGCTTAGATCAGAAGAAGAACGTTTGTCCATTCAGAATTTTAGCAAA 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     44% LeuLeuAsnAspAsnIlePhellisMetSerLeuAlaCysAlaLeuGluValValMet. 464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            465 AtaThrTyrSerArqSerThrSerGInAsnLeuAspSerG1yThrAspLeuSerPhePro 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         442 OTTAGGTALAOTAGAASTAGATTOGAGGATGGTGGAAGAAGTTTGTGCGTGCGG 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               445 TIPITOLEGASBVALLEGASBLEGLYSALAPBOASPPHELYIBSVALLIGGIBSCEPBC 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tob fletysAladladladlyAsuLeaThiArqGlaMetileLysHisLeaGluArqCysGluHis 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 405 PhoteuAspHisAspLys1brLeuGInThrAspSerIleAspSerPheGluThrGlnArg 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      445 AryfhrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAspGln 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7.47 COCICAGAATNICIGIT TOCCICICITAATATIGOOCOOCIAACOOCAAAGAAATICCC 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            48% Leur.ysArqVallysAspileGlyTyrilePhelysGluLysPheAlalysAlaValGly 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  405 GludiyGysValdiniletiySerGlaArqTyrLytLeuSiyValArqLetTyrTyrArq 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   882 TOGATTOTGAACGFACTTAATTTAAAGCCTTTGATTTTACAAAGTGALTGAAGTTTT 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /occure_tib="Scarces_mammary_qland_NMLMG"
//sex_tremaic_factaling"
//sex_tremaic_factaling"
//lash.resp.="DHIOB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              914
234
19
53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                indels:
                                                   /ordanism "Mus musculus"
[1] Aret "+ 1A to lenes"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09 026 459A:41 (1 897) x AA763411 (1-914)
                                                                                                   /elone "IMAGE:1247598"
     Location/Unalitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2, 454-92 1056,50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            82.148
75.978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22.818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aliqument Seates:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cuery Match:
                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                          MASSES COUNTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ž
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \frac{\hat{\Xi}}{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \frac{1}{2}
```

```
/nole-forgan brain; Vector: pGMVSPOKT 6; 1st strand cDNA was primed with a Not1 olioo(dT) primer. Five prime end enriched, double-stranded cDNA was disested with Not 1 and closed into the Not 1 and accopy sites of the pGMVSPOKT by vector. Library was normalized, Library was constructed by Life Technologies. Contact: Feng Liana Lite Defined Drive Rockville, Maryland 20850, USA Fax: (I) 401 610 8371 Email: Illandelliereth.com URL: (I) 401 610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomn;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ALS63757 LIL_NFLOOL_NRC4 Homo Sapiens cone esupportyA05 3
                                                                                                                                                                                                    585 LysClySerThrThrArqValAsnSerThrAlaAsnAlaGluThrClnAlaThrSerAla 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            525 ArgileMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeaTleLysGlu
                                         HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH 
                                                                                                                                                       545 SertysAspArgCluGlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP 191 91006 EVRY cedex - France
Email: seqret qenoscope.cus.fr, Web : www.qenoscope.cus.fr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   742
217
7
48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="neuroblastoma_cells"
/lab_bost="bH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genoscope - Centre National de Sequencage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"/db_xrel="taxon:9606"/
/clode="CSODD067YA05"/
/clode=11b="LTI_NFL001_NEG4"/
/sex="malie"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                792 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          605 PheclinthrollmaysProtectlys 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25 TTCCATACTCAGAAGCCATTGAAA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AL563757.1 GI:12913464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              prime, mKNA sequence.
AL563757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1043.00
84.54%
81.89%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 792)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AL563757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 10
AL563757/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE CHUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
                                                                                                                                                                                                                             윤
                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  --
```

US-09-026-459A 41 (1-897) x AL563757 (1-792)

```
mRNA linear EST 14-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Enkaryota, Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini: Hominidae: Homo
                                               224 SerAlaArdIleAlaLysGlnLeuGluAsnAspThrArdIleIleGluValLeuCysLys 248
                                                                                                                                                    3.1 AGTGGGGGWTAGCAACACAAYTAGAAATTGATACAAGAATTGATGAAGTTGTGTGTAAA 672
                                                                                                                                                                                                      249 OluHisoluCysAsaileAspoluValiysAsnValTyrPheDysAssPbelleFroFhe 268
                                                                                                                                                                                                                                269 MetAsmSert.cuCl;T.cuValThrScrAsmSl;T.cuTrucluValGluAsm.cuScrigs 288
                                                                                                                                                                                                                                                                                                                                                                                                       2*** ArtTyrilidlilleTyrLeutysAsnLysAspLeuAspAlaAryLeuPheLeuAspHls 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 605)
Roother,K., Beyer,A., Mewes,W., Weil,B. and Wiemann,S.
ESI (Roether, K., Beyer,A., Mewes,H.W., Weil,B. and Wiemann,S.)
Onpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                          551 CGATACGAAGATTTTTCTTAAAATAAAGATCTAGATGAAGATTATTTTGGWTCAT 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.1 SATAAAACICIICAGAYIGAITCIWIAGAGITTIGAAACACAGAAGAACACACAAAAA 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (29 SerAshleuAspGluGluValAshVallleProProHisThrPtoValArqThrValMet 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                349 AsnihriledindinlenmetmetilelenAsnSerAlaSerAspGlnBroSerdluAsn 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             371 GACAYIWICCAACAATTAATGATGITITTAAATTCAGGAAGTGTGGAAAGGTTGAGAAATT 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96.9 LeulleserTyrPheAsnAsnCysThrValAsnProLysGluSerIleLeuLysArgVal 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               251 AAGGATWTKGGATACWTYTTTAAAGAAAATTTGCTAAAAGCTGTGGAGACAGAGGTTGTGTC 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                409 GluffedlySerGlnArgTyrLysLeuGly--ValArgLeuTyrTyrArgValMetGlus 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (9) GAAATTSGATGACAGGGATACAAACTTFGGTTTGCGTTTGTTTAGGGGGGTAATGGGAAT 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     428 erMetLeuLysSerGluGluGluArqLeuSerIleGlnAsnPheSerLysLeuLeuAsn- 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       448 AspAssillePheHisMetSerLeuLeuAlaCysAlaLeuGluValValMetAlaThrTyr 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               141 CONTACTITATIONGANGANGANGATIATORATATATANGCACACACTCTGAATS 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ACANA VIITTICATATGIGATTATTGGGGGGGGGGGTCTTGAATTGTNATATA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2-2-13;81hrA1aVa111cFroTeAsisOtySerPtoArgThrPtoArgACtyClnAsiArg
                                                                                                                                                                                                                                                                                                                                  ALS99633.1 GI:15162921
EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Kochrer K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         468 SerAruSer 470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A1.599633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N_{\rm total} = 1.011 \pm 0.01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      K::ANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSI :N
KEYW :RDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 URNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AI.5.9'9' 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C. WMEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOUR.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Locus
                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>2</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                تَ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>></u>
```

```
Am Klopferspitz 18a D-82152 Martinsried, Germany This is the 5' sequence of the class insert Clone from S. Wiemann, Molecular Genome Analysis, German Cancer Research Center (CME2); Heall 3. "Hemannadkiz" heidelbergides sequenced by MMFZ (Biomedical Research Center at the Charite. Healin/Germany) Within the cDMA sequencing consertium of the German
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Flease contact the RZFD: Ressourceizentrum, Heubnerweq 6, 14059
Berlin-Charlottenburg, GURMANY, Email. clone@rzpd.de.
.ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       244 GluValLeuCystysCluHisGluCysAsnIleAspCluValLysAsnVallyrhCtys 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            284 CluAsnLeuSerLysArgTyrCluClulleTyrLeuLysAsnLysAspLeuAspAlaArq 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GAAAATCTTTCTAAACGATACGAAGAAATTTATCTTAAAAATAAAGATCTAGATGCAAGA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             804 LeaPhoLeaAspHisAspLysThrLeuGlbThrAspSerTleAspSerFheGluThrGln 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181 THATTITIGGAICATGATAAAACTCTTCAGACTGATTCTATAGACAGTTTTGAAACACAG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          324 ArgThrProArgLysSerAsnLeuAspGluGluValAsnVallleProProHisThrPro 343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   401 GITAGGACTGITATGAACACTATCCAACAATTAATGATTITAAATTCAGCAAGTGAT 460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           384 IleLeuLysArqValLysAspileGlyTyrIleFheLysGluLysFheAlaLysAlaVal 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 AFACTGAAAAGAGTGAAGGATATAGGATACATCTTFAAAGAGAAATTTGGFAAAGGTGFGFG 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            424 ArgValMetGluSerMetLeuLysSerGluGluGluArgLeuSerlleGluAsnPheSer 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        264 AshPhelleProPheMetAshSerLeuGlyLeuValThrSerAshSlyLeuProGluVal 283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GAAGTTCTCTGTAAAGAACATGAATGTAATATAGATGAGAGAAAAATGTTTGAAA 60
                                                                                                                                                                      No si dequence available.
This clone (DKF2p313F092) is available at the R2PD in Berlin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          344 ValArgThrValMctAsnThrIlcGlnGlnJcaMetMetfleLcuAsnSerAlaSerAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    364 ClnProSerGlaAsmieuileSerTyrPhcAsmAsmCysThrValAsmProTysGluSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism "Homo sapiens"
/db_xrei="taxon:9606"
/close "DKTZp3156092"
/dev_stage="adult"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-026-459A-41 (1-897) x AL599633 (1-605)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             106 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.00%
100.00%
100.00%
22.39%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.01e - 90
                                                                                                                                                                                                                                                                                            .605
                                                                                                                                                    Genome Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                              Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No.:
                                                                                                                                                                                                                                                                     FEALURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
```

435 GluArqLeuSerIleGluAsnPheSerLysLeuLeuAsnAspAsnIlePheHisMet Ser 454 455 Leut.cuAlaCysAlaLeuGluValValMetAlaThrTyrSerArqSerThrSerGlnAsn 474 4.37 TTATTGGCGTGCGCTCTTGAGGTTGTAATGGCGAGATATAGCAGAAGTACATCTCAGAAT 378

395 PhetysClutysPheAlatysAlaValGtyChGtyCysVatGtutTeOtySerGthArg 414

495 PheAspPheTyrLysValileGluSerPheIleLysAlaGluGlyAsnLeuThrArqGlu 514

515 MetlleLysHisLeuGluArqCysGluHisArqlleMetGluSerLeuAldTrpLeuSer

535 AspSerProLeuPheAspLeuTleLysGluSerLysAspAruGluGlyProThrAspHis 554

555 LeuGluSerAlaCysProLeuAsnLeu-ProLeuGlnAsnAsuHisThrAlaAlaAspMe 574

574 tPyrtcuScrPrcValArqScrProlgstystysStysCrPhilhrArqVal 591

5 44

```
RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AW58 1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
О.
                                                                                                                                                                                                                                                                                                                                                                               <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                         â
                                                                                     ć
                                                                                                                                                                       ŝ
                                                                                                                                                                                                            â
                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ...and) Site_2:
...and products derived
.716 - Dudwig Institute for Concer Research) products derived
into the pUC 18 vector. Reverse transcription of tissue mRNA and cNNA amplification were performed under low
stringency conditions."
                                                                                                                                                                  Dias Neto, E., Garcia Correa, E., Verjovski-Almeida, S., Briones, M. R., Naqai, M. A., da Sliva, W. Ji., Zago, M. A., Bordin, S., Costa, F. F., Goldman, G. H., Carvalho, A. F., Marsukuma, A., Baia, G. S., Simpson, D. H., Brunstein, A., depoliveira, P. S., Bucher, P., Jongeneel, C. V., O'Hare, M. J., Soares, E., Brentani, R. R., Reis, L. F., de Souza, S. J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This sequence was derived from the PAPESPZLICE Buman Cancer Genome Project. This cutry can be seen in the following URL: (http://www.llwin.com/blant.ht/srif/s/printzlinizfinlwing.pinlant.printzliniz.pinlant.html
                                                                                                                                                                                                                                                                                           Homo sapiens
Bukaryota, Metazoa: Chordata, Craniata, Vertebrata; Euteleostomi;
Mammalia; Butheria: Primates, Catarihini, Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Shotqun sequencing of the human transcriptome with ORF expressed
541 PGARTAATGGAATPPAATGCHTAAATPAGAAGAAGGATTATPCATTGAAATTTFAGG 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative.
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US OF 026 459A 41 (1 897) x BEUB2846 (1-694)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High quality sequence start: 58
High quality sequence stop: 669.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Laboratory of Cancer Cenetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fax: +55-11-2707001
Email: asimpson*ludwig.org.br
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zelone lib "B10642" Zdov, stago-"Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Seq primer: pur 18 torward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Simpson A.J.G.
                                                                                                                                                                                                                            HE082846.1 GI:8473151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5. 98c 90
1040.00
                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 694)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             +55 11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96, 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22.24%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1, 1, 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Beest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20202664
                                                                                                                                                                                                          BEOB 2846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                 6.01 AAA 60.4
                                                                                                                                                                                                                                                                          hillingin .
                                       444 Lys 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Aliquinent Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ouery Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOUTH
                                                                                                                                                                                    NOLLINITION
                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE CHINT
                                                                                                                                            HE018 284 6 /€
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDILINE
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Treat. No. :
                                                                                                                                                                                                            ACCESSION.
                                                                                                                                                                                                                                                                                                                                                         KEFERENCE
                                                                                                                         RESOLD 12
                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOHN NAT.
                                                                                                                                                                                                                                               KHYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1111E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                        SOUR'E
```

```
1 (bases 1 to 624)
Melton,D. Meadows,A., Cliffon,S., Hillier,L., Marra,M., Pape,D.,
Wylie,T., Martin,J., Elistain,A., Schmitt,A., Theising,A., Kitter
E., Rouko,I., Bennett,J., Cardenas,M., Gibbons,M., McCann,R., Cole
,R., Tsaqareishvili,R., Williams T., Jackson,Y. and Bowers,Y.
Washu Barvard Fancreas EST Project
         EST 14 MAR- 2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Endocrine Painteas consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave. Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Libraries were constructed by Dr. Douglas Melton
DNA sequencing by: Washington University Genome Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  For information on obtaining a clone please contact: Juliana Brown
                                                                                                                                                                                                                                                                                                                Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarthini, Hominidae, Homo,
AW583181 624 bp mRNA linear ESF 13 MAR: a fallb09.yl Human Panereatic ESFets Homo sapiens chua cione IMAGE:5638049 5' similar to qb:M15400 RETINOBLASTOMA ASSOCIATED
                                                                       PROTEIN (HUMAN); qb:M26491 Mouse relinoblastoma ASSOCIATEL protein (MOUSE);, mkNA Sequence. AM584181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Douglas Melton, Kiaus H. Kaestner, & Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: dmelton@biobp.harvard.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (brown*fas.harvard.edu)
                                                                                                                                                                                       AW583181.1 G1:7260125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rel: 617-495-1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fax: 617-495-8557
                                                                                                                                                                                                                                                                                     Homo sapiens
   AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MA 02138
                                                                                                                                                                                                                                                           human.
                                DEFINITION
                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                         ACCESSION
                                                                                                                                                                                   VERSION
KHYWORDS
                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                     SOURCE
   POCUS
```

475 AsmCysThuValAsmProLysGluSerileLeuLysArqValLysAspileGlyTyrile 394

```
3
                                                                                                                                                                                                                                                          Ander Tittun Finatous, Vector, FSFSTI, Site_1, Not 1, Site_2, Sal 1; Library constructed using SuperScript Plasmid (brany vit (iffo Tochrologies) cham made by oligo-df priming. Size-selected by column fractionation.
This sequence now available from the IMAGE consortium, for clone orders contact: into@image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        !fr: ValTyrFbeLysAsnPheIleProFheMetAsn:SerLeuGlyLeuValThrSerAsnGl 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6.1 GITTALLICAAAAATTTTABACCTFTTATGGATTGCTCTFGGACTTGTAACATCTAATGG 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           124 ACTICCAGAGGITGAAAATCITICIAAAAGGATACGAAGAAATITIATCITAAAAATAAAAA 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     299 pleuAspAlaArgleuPheleuAspHisAspLysThrLeuGlaThrAspSerileAspSe 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      419 rPhecluThrGlnArgThrProArgLysSerAsnLeuAspGluGluValAsnValIlePr 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          339 OPTOHISTERFEVOALANGThEVOALMOCKSBTPHILIGGILGIGLOMOCKMOCKILGLOMAS 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             379 nProbyssluserfleteurysArqValtysAspIleGlyTyrfleFhetysGlutysFh 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           399 eAlalysAlaValGlyClnGlyCysValGlu!!cClyScrGlnArgTyriys!,cuClyVa 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         303 TOCACACACACTCCACTTACGACTCTTATGAACACTATCCAACAATAATGATGATTTTAAA 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                543 FOGETTGTALLACOGAGTAATGGAATGCATGCTTAAATCAGAAGAAGAAGGATTTATGCAT 602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     274 picarrollaValGluAscicuScripsArgTyrOluGluileTyrLcuipsAsnipsAs
                                                                                                                                                                                                                                                                                                                                    average insert size 1.08 kb. Primary library, unamplified."
                                                                                                                                                                                                                                                                                                                                                                                1 others
                                                                                                                                                                                /clone_lib "Human Pancreatic Islets"
                                                                                                                                                                                                 /tissue_type "islets of Langerhans'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                186 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              indels:
                                                                                                                 /organism-"Homo sapiens"
/db_xref-"laxon-wk66"
/clone-"HMAGF:5638049"
                                     Seq primer: -40RP from Gibco
High quality sequence stop: 430.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       '2h-459A-41 (1-897) x AW583181 (1-623)
                                                                                ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                109 9
                                                                                                                                                                                                                                       /lab_host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.18e-88
1016.00
98.07%
                                                                                                                                                                                                                                                                                                                                                                                  ر
1930ء
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97.108
21.948
                                                                                                1. .623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Bost (coal Similarity:
Quory Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                           Albendent Scores:
                                                                                                   SOUTOR
                                                                                                                                                                                                                                                                                                                                                                              BASE . UNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                             FEALTRES
                                                                                                                                                                                                                                                                                                                                                                                                   Z ... X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           i.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
```

449 eGlnAsnPheSerLysLeu 445

```
/note-"Vector: pT7T3D-Fac (Pharmacia) with a medified polylinker; lst strand cDNA was prepared from mannary gland tissue from a lactating female, and was then primed with a Not I fallgo(dT) primer FookPassisted from was ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library is normalized. Library
                                                                                                                                                                                                                                                                                                                                                                                                                 i (bases i to 871)
barro,M., Hillier, Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
Geisel,S., Kiroaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptoe,M., Tan,P., Underwood,K., Moore,H.,
                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metarca, Chordata, Cramiata, Vertebrata, Euteleostomi:
Mammalia, Butheria, Rodentia, Sciurognathi; Muridae; Musinae: Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Library
                                                                                                                                     vw54h01.rl Soares_mammary_alasd_NMLMS Mus masculus cDNA clone
IMAGE:1247665 5' similar to qt.M15400 RETINOBLASTOMA-ASSCOLATED
PROTEIN (HUMAN); qb:M26391 Mouse retinoblastoma susceptibility
protein (MOUSE);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This close is available toyalty-free through LLML, contact the IMAGE Gosentium (info@image.ilul.gov) for further information. MG1:661353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     was constructed by Bento Soares and M. Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              325 ThrProArgLysSerAsn--LeuAcpGluGluValAssvallleProProHisThrProV 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 344 alArqThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAspG 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Theising, B., Wylie, T., Tennon, G., Soares, B., Wilson, R. and Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Washu-HHMI Mouse EST Project
Washington University School of MedicineP
444 Forest Park Parkway, Box 8501, St. Louis, Mc 63108
                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib-"Soares_mammary_qland_NMLMG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Seq primer: -28ml3 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative:
Mismatches:
                                                                                                                        mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /sex-"female (lactating)"
/tissuc_type="mammary gland"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (1996)
Contact, Maiia M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                [Edc.] 8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Mus musculus"
/dt_xtef="taxon_i6590"
/clone="IMAGE:1247665"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-026-459A-41 (1-897) x AA763485 (1-871)
                                                                                                                      871 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      High quality sequence stop: 495.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                    AA763485.1 GI:2813232
603 TCAAAATTTTAGCAAACTI 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1013.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3.820-88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21.878
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             74.48%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tel: 314 286 1800
Fux: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .871
                                                                                                                                                                                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                                                                    house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity:
Query Mutch:
                                                                                                                      AA763485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                             DEFINITION
                                                                                               AA763485/C
                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                        RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                    VEPSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                   LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ó
```

```
linear EST 13-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Metazoa, Chordata, Craniala, Vertebrala, Euteleostomi;
Mammalia: Eutheria; Primates; Catarrhini; Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    602464278F1 NIH MOY 90 Homo sapiens con clone IMAGE:4472611 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                504 helletysAladludlyAsmiculhrArgGluMetiletySHishouGluArgCysGluH 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               424 rayalMet ƏluSerMet LeuLySSerGluGludluArqLeuSerTlethathaAnPheSerL 444
                                                                                                                                                                                                                                                                                                                                                               HUR TEMS GOMENTHER GALAMERAN BOSACCAL FAGGGGG TILLI FAAT FEGGGAAGTATCA 745
                                    94 InProSerGluAsnLeuIleSerTyrFheAsnAsnCysThrValAsnProUySGluSerI 384
                                                                        744 GOCCATOGGAAAATCTIGITGGGTGGTTGGATATTGTGGGGTTAGGTGGAAAGAAGAATC 685
                                                                                                                                                 684 TOCTAGGAGGITAAAGGITGIGIGIGGGGGGTTAAAAGAGGGGTTGTTAAAGGGGGTGTGGG 625
                                                                                                                                                                                                                                                                                                      554 STGTGATGANATGCATGCTTAAATCAGAAGAAGAAGGTTGTGTGGTTCAGAATTTTAGCA 505
                                                                                                                                                                                                                                                                                                                                             444 ystantanasnasnasnatophotismotsortouronalacysalatoustuvalvalm 464
                                                                                                                                                                                                                                                                                                                                                                                                                        464 etAlaThrTyrSerArgSerThrSerGlnAsnLeuAspSerGlyThrAspLeuSerPheP 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      524 isArqlleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysG 544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   544 InsertysAspargalaalyProThrAspHisteadluserAladysProLeuAssLeuP 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             564 ToleuGinAsnAsnHisThrAlaAlaAspMetTyrLenSerProValArqSerPreLysT 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                               184 TelevilysArqValTysAsp11601yTyrTTeeherys610FyseheAlarysAlaVa1C 404
                                                                                                                                                                                     404 lyGluGlyCysVilGlufleClySerGlaArqTyrLyGLeuGlyValArqLeuTyrTyrA 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        584 ystysctlyserthratetValAsnSerthralaAsnAlaciuThrcinAlaThrserA 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            147 CFCFCCAGGTAACCATACTGCAGCAGATATGTATCTTCTCCTCTAAGATCTCCCAAAGA 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9.7.2 trp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: eqapps remail.nih.gov
Lissue Procurement: ALCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   604 laPheGluThrGlnLysProLeuLys 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.1 COTTRICATACTOAGAAGGGATTGAAA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HG253543,1 GI:12763359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases | to 922)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1999)
Contact: Robert Str
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mPNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bome sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B65254544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           H:25 154 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTESSION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KELEKEN, E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOHNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PESSILL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H17754544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHAMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S. S. O. S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SH. SH
                                                                                                                                               ź
                                                                                                                                                                                         5
                                                                                                                                                                                                                    ÷
                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                  =
                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
```

```
Site_2: Sall; Cloned unidirectionally; olino di primed.
Average insert size 1.7 kb. Library enriched for full-length clones and constructed by Lite Technologies. Note: this is a NH_MSC [Library."
                                    DNA Sequencial by Incyte Genomics, Inc. Clone distribution: MGC clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLML at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         727 rValPheMetGluArqLeuLysThrAsnIleLeuGluTyrAluSerThrArgFroFroTh 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         827 lleulysArqSerAlaGluGlySerAsnProProLysProLeuLysLysLysLeuArqPhoAs 847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 GCATTG-GACCAAATTATGATGTGTTCCATGTATGGCATATGGAAAAGAAAAATAAGA 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120 COTTANATICANAATCAT GTAACAGCATACAAGAATCITGCTCATGCTGFTCAGGAGAC 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         297 CITGICACCAATACCICACAITCCICGAAGCCCITACAAGITTCCIAGGTTCACCG 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  767 qileProdlyGlyAsmileTyrileSerProLeuLysSerProTyrLysHeSerGluS1 787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          787 yLeuProThrPysMetThrProArdSerArqIleLeuValSerIleGlygluSe 807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 417 ICIGGGAAGACGAAGAAAAAAAGACHCCAAGAHCAAAHCTIAGIATCAAHHGCHGAATC 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       477 ATTCGGGACTTCTGAGAAGTTCCAGAAAATAAATCAGATGGTATGTAACAGCGACCGTGT 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="adenocarcinoma, cell line"
/lab_kost="DH10B (phage:resistant)"
/note="organ: liver: Vector: pCMV SERTE, Site_1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1648 IlelleTrpThrLeuPbeGlnHisThrLeuGlnAsnGlu TyrGlnLeuMetAtuAspAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     707 rPheLysArqValLeuIleLysSluGluSluTyrAspSerllelleValFSeTyrAsuSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 238 GGTCTTCATGCAGAGAGTGAAAAGAATAATI IIGGAAGAGGTAGGTAGGTAGGTAGAGGCGGGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             807 rPhcGlyThrSerGlutysPhcGlutys!!!cAsuGlsMctValCysAsuGctAspAr4Va
CONA Library Proparation: Lite Technologies, I.e. CONA Library Arrayed by: The L.M.A.J.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismutches:
                                                                                                                                 column: 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          indels:
                                                                                                                                                                                                                    /organism-"Homo sapiens"
                                                                                                                                                                                                                                                           /clone="IMAGE:4472611"
/clone_lib="NIH_MGC_90"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-026-459A-41 (1-897) x BG253543 (1-922)
                                                                                                                              Plate: LIAM10294 Trux: 1 Colomos
High quality sequence stop: 633,
                                                                                                                                                                                                                                         /db_xret-"taxon:9606"
                                                                                                                                                                          Location/Qualitiers
                                                                                                     http://image.llnl.gov
Plate: LLAM10253 row: |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3,130-87
1004,00
90,51%
88,54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21.688
                                                                                                                                                                                                 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               307 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ..
့
                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . 8
---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Пр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
```

Search completed: January 19, 2003, 05:06:36 July: time : 1997.53 secs

```
Genfore Version 5.1.3
Copyright (c) 1993 2003 Compagen Ltd.
```

```
(without alignments)
7320.587 Million cell updates/sec
                                          January 17, 2003, 18:27:24 ; Search time 2053.03 Seconds
                                                                                                                                                                              1 MPPKTPRKTAATAAAAAEEE ......FRM@K@KMNDSMDTSNKEEK 928
                                                                                                                                                                                                                                                                                                                                                                                                            32308132
nucleic search, using trame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                            16154066 seqs, 8097743476 residues
                                                                                                                                                                                                                                                                                                                                                                                                       Lotal number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fost processing: Minimum Match 0%
Maximum Match 100%
Lasting first 45 summaries
                                                                                                                                                                                                                                                 Xqupop 10.0 , Xqupext
                                                                                                                                                                                                                                                                      Yqapop 10.0 , Yqapext
Fqapop 6.0 , Fqapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                US 09:026 459A 51
4738
                                                                                                                                                                                                                         BLOSUM62
                                                                                                                                infle:
Perfect score:
                                                                                                                                                                                                                         Scoring table:
W protesta
                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                                                                                                               Sear ched:
```

command line parameters.

MODEL-Traine | p2n_model | -DEV_x1h | OPER_Traine | DEV_X1P | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine | OPER_Traine

em_qss_mus:* em_qss_other:* em_qss_pro:* qb qss:*em qss.bum:*em qss_inv:* dss_pln:* em dss_tun:* em_qss_mam:* em_esttun:* em_estpl:*
em_estro:*
em_htc:* em_estom:* qb_est2;* qb_hte;* • : With | S | | | Intill : • ell, est ba: * om_estin:* qb est 4:* em estmu:* em_estoy:* qb_estl:* ŧξ EST: * bat abase :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Result. No.	Score	Ouery Match	Ouery Match Length DB	H C		beset (pt ton
,	188	59.2	1364	Ξ	AK011246	AKOI1246 Mus museu
.2	-	32.3	1051		BM561083	BMS61084 AGENCOURT
~	_	C1 0 2 1	. 98 1. 98 1. 98	7	HODE0275	HOZZGZ75 ACHNOGURI
7	_	27.9	1001	~	BM475603	BM475604 ACENCOURT
r.	_	e: 33 C4	r: :+	<u>.</u>	A1.597811	A1597811 DKEZp 4130
ا ع	~ . 	25.8	⊖88 8	- 1	BQ222227	RQBBBB7 AGENCHURT
7		다. (S) (대	8.3	~	BM453724	HM453724 AGENCOU
œ.		04 I €4 I	÷ ?≎ :	<u></u>	BM4 500 41	RM450031 AGENCOURT
	501	22.7	83.2	<u>-</u>	A1646038	A1646038 vw54a10.x
၂ ၂	105	22.0	412	5	AA76 1411	AA763411 vw54a04.r
		7	25.	7	AL56 4757	Al.563757 Al.563757
	٠,	21.6	606	خ	AL599644	AL599643 DKFZp414P
~i .		2	6.94	ු -	BE082846	BE082846 RC2 BT064
14	_	21.2	623	10	AW584181	AW584181 iallh09.
0 15		_ 	871	<u>.</u>	AA764185	AA76.5485 vw54h01.r
16		50.4	्य इ.स. इ.स.	_	BG25 4543	HG214144 002364278
17		20.4	588	0	AW368244	AW368234 CM3 HF018
18	96	20.1	709	J.	A1646097	A1646097 vw54h07.x
19		20.1	736	13	B1151568	BI151568 60291610B
20		0.07	194	10	AV715533	AV715534 AV715543
21		19.9	584	12	HG149050	HG149050 nu88ecol.
2.5	94	19.7	734	1.2	BF144857	HF144857 60179034
23		и 5-	э к ч.	J.	A1.692790	ALE 92730 DKF2D3141
24	908	18.9	197	10	BE539278	HE5.39278 60106456
25		18.8	615	<u></u>	AA959836	AA959846 vw54h01.s
C)		ار ا ا	1154	-7	BM802736	BMBC2736 AGENCOURT
27		3)	C+	œ	AL120941	ALC 20341 DKFEP762
C	B7	e:	7 14	~	B1526982	B1526982 602927177
53	86	60.	625	 C1	HC241088	BG244088 602358151
30		17.9	263	C1	BE941246	
		17.6	484	10	BE168095	BE168095 QV3 HT051
3.5	æ	17.4	646	7	BM490416	BM490416 pqp2n.pk0
÷		17.2	464	10	AW502887	AW502887 UL-HF-BN0
34	80	17.0	522	5	AA072780	AA072780 num76a05.r
~ .5		16.9	545	0	BE692220	MIC692220 ut26e04.X
36		16.5	643	~	BI554947	RI554947 604194806
3.7		16.4	2083	7	BM456728	BM456728 AGENCOURT
œ ~		٠.	4 5 4	0	AW50 4514	AW50.4514 U1 - HF - INO
Ϋ́		₹	675	<u> </u>	AA959709	AA959709 VW54a04.8
4	5	Ψ.	472	5	AA955457	AA955457 UL R-A] e
		-	462	<u>,</u>		A1606529 vb27q08.y
	89	14.2	æ ₹	_ •	BF827047	BU827047 KC3 HN90.
₹.	681.		799		C82304	C82304 C82304 Livuk
44	œ.	14.2	514	17	BF418684	BF418684 U1-F BJ2
L 7					13 14 (1.6 (3.4.1)	

ALIGNMENTS

RESULT 1 AK011246	
Shōot	AK011246 1364 bp mena 1364 b man 1500at Htc 19 dan 2002
DEFINITION	Mus musculus 10 days embryo whole body chwa, kiken full length enriched library, clone:2609017M22:retinoblastomua }, full insert
ACCESSION	Sequence. AK011246
VERSION	AK011246.1 G1:12847243
KEYWORDS	HTC; CAP trapper.
SOURCE	Mus musculus (strain:C57BL/6J) 10 days embryo chwa to mkwa,
	clone_lib:RIKEN tull-length enriched mouse cONA library
	cione:2600017M22.
ORGANISM	Mus musculus
	Bukaryota, Metazoa, Chordata, Graniata, Vertebrata, Enteleostomi,
	Mammalia; Eutheria; Rodentia; Sciuroquathi; Muridae; Murinae; Mus.

```
Adachii T. Ariawa F., Akahira S. Akimura T. Acho H., Aria, A.,
Arakawa, L. Haldarelli, R., Bono, H., Brownstein, M., Bult, C.,
Carnino, P., Fukuda, S., Fukunishi, Y., Furuno, M., Hangaki, T.,
Hara, A., Hayatsu, N., Hill, D., Hiramoto, K., Hiracka, T., Hori F.,
Hume, D., Imcrani, K., Ishii, Y., Iroh, M., Irawa M., Kasukawa, T.,
Karo H., Kawai, T., Kojima, Y., Konno, H., Konda, M., Koya, S.,
Kurihara, C., Matsuyama, T., Mayazaki, A., Nishi, K., Nomura, K.,
Numazaki, K., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Quackenbush, J.,
Sahto, H., Saito, R., Sakai, C., Saada, K., Sasaki, D.,
Schriml, L., Shibata, K., Shibata, Y., Shinagawa, A., Shiraki, T.,
Tanaka, T., Tejima, Y., Toya, T., Yamannaka, I.,
Yasunishi, A., Yoshida, K., Yoshino, M., Muramais, M., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kawai.J., Shinaqawa.A., Shibata.K., Yoshino,M., Itoh,M., Ishii,Y.,
Arabwa. T. Hara.A. Pubunish.Y., Konno.H., Adachi.I. Fukuda.S.
Alawa.K. Izawa.M. Nishi.Y., Konno.H., Kondo.S., Yamanaka.I.,
Sairo.T., Ckarah.W. G.J.Hari.T. Han.H., Kasukawa.I., Saito.P.,
Kaddia.K., Matsuda.H., Ashburner.M., Batalov.S., Casavant.T.,
Fleischmann.W., Gaasterland.T., Gissi.C., King.B., Kochiwa.H.,
Kuehl.P., Lewis.S., Matsud.T., Gissi.C., King.B., Kochiwa.H.,
Ouarkenbash.J., Schrimil.M., Stabbli.F., Suruki.R., Tomita.M.,
Wagnori.L., Washio.T., Saki.K., Okido.T., Suruki.R., Hoffelli.D., Hojunga.N.,
Baldarelli.R., Harsh.G., Hlake.J., Hoffelli.D., Hojunga.N.,
Carnhucl.P., de Bonaldo.M.F., Brownsteln.M.J., Bult.C.,
Fletcher.C., Fuilta.M., Gariboldi.M. Gistincich.S., Hill.D.,
Holmann.M., Hume.D.A., Kamiya.M., Lee,N.H., Lyons.P.,
                                                                                                                                                                                                                                                                                                                                            Itch, M., Konno, H., Okazaki, Y., Hayatsu, N., Segahara, Y., Shibata, K., Normalization and Subtraction of cap trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes 20499374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Marchionni, L., Mashima, J., Mazzarelli, J., Mombacrts, P., Nordone, P., Ring, H., Ringwald, M., Rodriguez.i. Subamere, N., Sasari, H., Sato, R., Seborbach, C., Seya, T., Shibata, Y., Stoch, K. P., Suzuki, H., Toyo-oka, K., Mang, K. H., Weitz, C., Whittaker, C., Wilming, L., Wynshaw-Boris, A., Yoshida, K., Haseqawa, Y., Kawaji, H., Kohtsuki, S. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Shibara K. Itoh M. Alzawa, K. Nagaoka, S. Saraki, N., Carninci, P., Sumi, N. Akiyana, T. Nishi K. Kitsunai, T. Tashiro, H. Itoh, M., Sumi, N., Ishi, Y., Nakamara, S., Hazama, M., Nishing, T., Harada, A., Yamamata, F. Matsumata, S., Hazama, M., Nishing, T., Harada, A., Yamamata, F. Matsumata, E., Matshiwaji, N., Yoneda, Y., Ishikawa, T., Yawa, W., Chara, E., Watshiki, M., Yoneda, Y., Ishikawa, T., Osawa, K., Tanaka, T., Matsumata, S., Kawai, T., Osawa, K., Tanaka, T., Matsumata, S., Kawai, T., Osawa, K., Tanaka, T., Matsumata, S., Kawai, T., Osawa, R., Tanaka, T., Matsumata, S., Kawai, T., Osawa, R., Tanaka, T., Matsumata, S., Kawai, T., Osawa, R., Tanaka, T., Kita, A., and Hayashizaki, Y., Osawa, R., Shimanata, M., Matsumata, S., Kawai, T., Osawa, R., Shimanata, M., Matsumata,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-690 (2001)
                                                                                                     High-efficiency full-length cDNA cloning Meth. Enzymol 303, 19-44 (1999)
                                                  Carminci, P. and Hayashiraki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 1364)
                                                                                                                                                        Meth. Enzymol
99279253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCLOME Res.
20530913
                                                                                                                                                                                                                                                                   10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20499374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21085660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1121785
                                             AUTHORS
                                                                                                                                                                                                     MEDLINE
HETEREN, F
                                                                                                                                                             JOURNAL,
                                                                                                                                                                                                                                                                   PURMED
                                                                                                                                                                                                                                                                                                                           T. XIXIXIX
                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JUNEANAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIENE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HINNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEFEKEN'E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LINKRAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MALDICIAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
```

Physical and Chemical Fessarch (FIKEN) Laboratory for General Park Lord Lord (SC), PIKEN Verbrana Institutes (SC), PIKEN Verbrama Institutes (SC), Radiagawa 230-0045, Japan (Ermail:genome-resensor.fiken.go.jp, URL:http://genea.go.jp, URL:http://g

Submitted (10-101-2000) Veshibide Hayashizaki, The Institute of

Direct Submission

JOICKNAT.

LILE

```
DNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Fixen Cornolic Sciences Center and Genome Exploration Research Group in Kikhn. Division of Experimental Animal Research in Riken contributed to propare mouse tissues. First strand cDNA was primed with a primer [5, Aaiahahahahahahahanderprintiffrity] 31, cDNA was prepared by using trehalose thermo-activated reverse transcriptase and subsequently enriched for full-length by cap-trapper. Second strand cDNA was propared with the primer adapter of sequence [5, GAGAGAGATHTARITAATHAATHAATHACCCCCCCCCCCCC 31, cDNA was cleaved with XhoI and SSTI. Cloning sites, 5, end: XhoI; 3, cnd. SSTI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DLDEMPET FTELGK STETSVYK FFDLLK FTINT STRVUNAMSRLLKKYNVL CALYSKLE
FTCELLYLTQPSSALSTELNSKLVIK SMITFELSK GEVLORDDILVIN SFQLMLCVVD
FTCELLYATALISER FTALLYIMSKR FTPRES, WESAR TANGLEND IKT IN VICKREHE
ONT TEVRINVERKETTETING TINSSKRETTER STREET TANGLER FTELD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /translation-"MPPKAPKRAAABPPPPPPPPPPRDPADPSGPHHLPLARHEE
EIEEPEFIALCQKLKVPDHVPERAWLTWEKVSSVD711.EGYIQKKKELW31C1FIAAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_lib-"RIKEN full-length enriched mouse chNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KTLOTOP I DSPETERTPRKNNPPEBANVVTPHTPVRTVMN1 TOOLMV 11 NSASDOPSE
                          Please visit our web site (http://genome.gsc.riken.go.jp/) for
further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        151 ATGÓCÓCCAAAGCCCCCGCGCAAGACCC 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           253 GAGTTGTTGTTGTTTGAGTTTGAAGATTTGAAGAAAATTGAAAGAAAATTAATTGCATTA 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MetProProLysThrProArqLysThrAlaAlaThrAlaAlaAlaAlaAlaAlaAlaGluPro 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21 ProAlaProProProProProFroStaGluAspProGluGlaAspSer31yProGlu 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note:"data shurbe MSP, spurbe kegradi.97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref-"FANTOM_DB:2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismutthes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      307 q 346 t.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ódov_stago="lù days embrye<sup>#</sup>
1. .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xrel "MGD:MG1:1905260"
/db_xrel-"taxon:10090"
/clone-"2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /protein_id="BAB27493.1"
/db_xref="G1:12847244"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Mus musculus"
/strain="C57HL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref-"MCD:MG1:97874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-69-026-459A-51 (1-928) x AK011246 (1-1364)
                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NLISYFNNCTVNP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.42e-177
1883.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cvidence:15S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .>1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene-"Rbl"
Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93.668
87.078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity.
                                                                                                                                                                                                                                                                                                                                                                                         Host: SOLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      404 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ..
No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                 PEATURES
                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    red.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
```

```
111 THEFTH HITTER THE TELLIFIER TO THE TELLIFIER THE TELLIFIER TO TRANSPORTED AND THE TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTED TO TRANSPORTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             974 CACGANTGIAATATAGATGAGGTGAAAAATGITTATITCAAAAATTTTATGCGITTIAIA 1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               115 CAAAACACTICAGACTCCTATAGACAGTTTTGAAACAGAGAGAACACGCGAGAAAAAAC 1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       273 ACLATEGAACAALTAATGGTGATTTTAAALTGTGGAAGTGATGAGGGATGAGAAAATGTG 1332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421 TyroludlulleTyrLeuLysAsnLysAspLeuAspAlaArgLeuPheLeuAspHisAsp 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     441 LysThrieuGluThrAspSerIleAspSerPheGluThrGluArqThrProArgLysSer 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              461 AsulzuAspüluüluValAspValileProProHisThrProValArqthrValMetAsp 380
81 ValSerSerValAspGlyValLeuSlySlyTyrfleGluLysLysLysGluLeuTrpGly 100
                                                                                                          373 GILLICALPOLOGA FOGAALPOLGGAAGGATATATTCAAAAGAAGGAAGTGTGGGGG (432
                                                                                                                                                                                                         101 HeCystlePhelleAlaAlaValAspLeuGlyAspMetSerPheThrPheThrGluLeu 120
                                                                                                                                                                                                                                                                      [4] ChilipsAsid Lethol Lordov Val Bistrystha PhoAsid out yethor LoAspithr 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               141 SerThilysValAspAssAlaMetSerArgieuLeuLysLysTyrAspValLeuPheAla 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    161 LeuPheSertystendlaArqThrCysGluLeuIleTyrLeuThrGluProSerSerSer 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 HeserthrGlutteAsnSerAlaLeuValleuLysValSerTrpHeffbrPheLeuLeu 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             201 AlatysolysloValtoorSluMetSluAspAsptouValIleSerPbaslnLeaMetLeu 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                221 CysValleaAspTyrPhell+LysLeuSerProProMetLeuLeuLysGluProTyrLys 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 Thi Alaval Hetro HeAsnelySer ProArgThr ProArgArgeTyGHnAsnArgSer 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              261 AlaArqileAlaLysGlnLenGluAsnAspThrArqileIleGluVa}LenCysLysGlu 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         91.4 OPTEGGALAGGAAAGAAGTAGAAALGALAGGGGGTTATGGGGGFTGTGTGTGTAAAGAA 972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28] HistilutysAsailleAsptlaValiysAsaValiyrPbatysAsaPbatyeAshPbaTrobhaMei 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  401 Ashisertzen/1912-auValThrSerAshGlyLeuProGluValGluAshicuSerLysArq 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301 Thillestustinteumer Met.HetenAsnserAlaserAsptinProserGluAsnLeu 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        674 TIATCTACTGAAATAAATTCTAIGTIGGIGCTAAAAATTTCTTGGATCACTTTTTACTA 732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            401 HeSerTyrPheAsnAsnCysThrValAsn 410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 2
                                                                                                    Ē
                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \frac{2}{3}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>----</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
```

```
Znote-"Organ: eye: Vector: pCMV SFORT6, Site 1: Not1;
Site_2: Sall; Cloned unidirectionally. Primer: oliqo di.
Average insert size 1.75 Kb. Library constructed by Lit
Technologies."
                                                                                            Homo sapiens
Eukaryota; Metazoa; Chordata: Graniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                           cDNA Library Preparation: Lite Technologies, Inc., CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencia by Apparent Edoscience Corporation Clone distribution in the distribution in the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 1051)
NIH-MGT bitp-//war sei nih qev/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           453 TyrTyrArgValMetGluSerMetLeuLysSerGluGluGluArgLeuSerTletInAsn 472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64 TATTACCGAGTAATGGAATCCATTAAATCAGAAGAAGAAGATTATCCATTCAAAAT 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        473 PhesertysteuteuAsnAspAsnIlePheHisMetSerteuteuAlacysAlalandlu 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          493 ValValMetAlaThrTyrSerArgSerThrSerGlnAsmLenAspSerGlyThrAspLeu 512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                513 SerPheProTrp11eLeuAsnValLeuAsnLeuIysAlaPheAspPheTytLysVallTte 532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  304 GAAAGT FTTA FCAAAGCAGAAAGGCAACTTGACAAGAGAAATGATAAAAAATT LAGAAAGA H6 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="retinoblastoma"
/lab_host="DH10B (phage:resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                         http://image.llnl.gov
Plate: U.AM1226: row: m -column: 18
High quality sequence stop: 737.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         299-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches:
                                                                                                                                                                                                                                 Contact: Robert Sfrausberg, Ph.D.
Email: cqapbs-r*mail.nih.qov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /ordanism "Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-04-026-459A-51 (1-928) x HM561083 (1 1051)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone_lib-"NIH_MGC_67"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="IMAGE:5550905"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       197 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
1. .1051
                                  HM561083.1 G1:18806043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.720 144
1551.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94.26%
91.50%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         221 c
                                                                                                                                                                                                                 Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12.138
5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7
                BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                              human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                           ES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No.:
                ACCESSION
VERSION
                                                                                                                                                        REFERENCE
ATTHORS
                                                                                                                                                                                                             JOURNAL
                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                               1111E
                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>2</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10.005 _{100} MeVA 1 meVA _{1100} MeVA 1 meVA _{1100} MeVA 1 meVA _{1100} MeVA AVENCOURT_6566134 NIH_MGC_67 Homo sapiens cDNA clone IMAGE-5550905
```

Library constructed by Lite

4 others

553 CysGluHisArgIleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeu 572

à

```
Alssweltyper"embryonal carrinoma, cell line"

[Ab bost="DH10B (phage-resistant)"

[Ance-lorgan: testis: Vector: pcMV-SFORT6, Site_1: NotI:

Site_2: Sall: Cloned unidirectionally; oligo-dT primed.

Arerage insert size 2.5 kb. Libiar, enriched ior

full-length clones and constructed by Life Technologies.

Note: this is a NHH_MCC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           408 ThrValAsaProtysCluScrItc.eubysArgValtysAspHcGlyfyr HePholys 427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            448 LeuGlyValArqLeuTyrTyrArqValMeUSluSerMetLeuLysSerGluGluGludluArq 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             248 31;56:rPtoArgThrFroArgArg32;52hAShArgSerAlaArgIleAlaEgo31nten 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          243 GTGAAAAATGTTTATTTCAAAAATTTTATACGTTTTATGAATTCTCTTGGACGTGTAACA 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    328 AsnLysAspLeuAspAlaArgLeuPheLeuAspHisAspLysThrLeuGlnThrAspSer 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           348 HeAspScrPhcCluThtCliAtgThtPtoAtgLysScrAsntcuAspGluStuVa.Asin 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                483 GIAALHUULUQACACACICCAGIIAGGAURUHAHGAACACHAHUCAACAAHAAHGAHG 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               543 ATTITAAATICACCAAGIGAICAAGCIICAGAAAAIGIGAITIGGIAIIIIAACAACTGG 602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                603 ACAGTGAATCCAAAAGAAAGTATACCTGAAAAGAGTGAAGGATATAGGATATAGGAINCAICIIIAAA 662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         428 GlutysPheAlatysAlaValGlyGlnSlyCysValGluIleGlySerSloArgTyrtys 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           663 GAGAAATPPGGPAAAGGTGTGGGGAGAGGGTTGTGTGGAAATTGCATGAGAGGGATAGAAA 722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            308 SerAsnGlyLeuProGluValGluAsnLeuSerLysArgTyrGluGluIleTyrLeuLys 427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      368 ValileProProHisThrProValArqThrValMetAsoThrileGlnGlnLeuMetMet 387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 ATGGAAGATGATCTGGTGATTTCATTTCAGITAATGCIAJGTGTCCTTGACTAJTTAIT 6.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Consorvative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches:
/db_xrel-"taxon:9606"
/clone-"IMAGE:6044522"
/clone_lib-"NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             es-e9-026-459A-51 (1-928) x BQ220275 (1-881)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2.75e-134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1448.00
48 368
97.968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30.18%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity:
                                                                                                                                                                                                                                                                                                                                                       313 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BOLDSER'S
ACHRAC (URL_757262) NIH_MSC_92 Home supiens China elone IMACH.6044522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapions
Eukaryota; Metazóa, Chordata, Craniala; Vertebiata, Euteleostomi,
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         673 | HISPERT | GOOD BEST | FINDER THE FOR THE STEEL FOR AND ASSET OF STREET | FINDER THE FINDER THE FINDER THE FINDER THE FOR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cona Library Preparation: Life Technologies, Inc. cona Library Arrayed by: The L.M.A.G.E. Consortium (LLNL.) DNA Sequencing by: Agencourt Bioscience Corporation Clonne distribution: MGC clone distribution information can be noted through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                          573 HetyschasertgsAspArgCluClyPreThrAspHisLeuCluSerAlaCysProteu 592
                                                                                                                                                                                                                                                                                  613 ProLysLysLysGlySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGlnAla 632
                                                                                                                                                                                                                                                                                                                                                                                                                         5.53 LysValTyrArgLeuAlaTyrLeuArgLeuAsnThrLeuCysGluArgLeuLeuSerGlu 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7.3 LysVillysAssiloAsp LoutysPhotysIleIleValThrAlatyriysAspLouFt 732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                424 ATTAAACAATCAAAGGACCGAAAAAGAACCAATGAIGTGAGTIGAALG1GCFIGICCTCTT 483
                                                                                                                                                                                                                                             593 AsnLeuProLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerPreValArgSer £12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         644 - AAAGTGTATCGGCPTAGCPFAFFPPCGCCTAAAFAACACTPTGTGAAGGGGTTTFFTGTGTGTAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7.2 offishlaValGlnGlyThrPhoTycAraVal LeufleLysGlnGlyGlu TyrAspSer 751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  964 IATATAANNATTOOTATAAOTOGGGOOTTTOATGGAAGGAGAOTGAAAAAAATA 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ^{752} HetteVal-----PheTyrAs SerValPheMetGlnArgLeuL_{7}sThrAsnile 768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               693 Physiog Motargasparg #5 showaspointhe Met Met SysSer Met Sys 11 L. Sys
   Plate: LLAM13287 row: e column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1999)
Contact: Rebert Strausberg, Ph D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism·"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stop: 690
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tissue Procurement: AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RQ22^27=1 3T 20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mPNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOUTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CRIANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOCKNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FLATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20,001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1:1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
```

7.14

\$6.7

```
DKF2p318:0816_rl 313 (synchym: blev2) Homo sapiens conA clone
ALSP2p418:0816_5', mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Poustka.A., Wellenfeuther,R., Mewes.H.W., Weil,H. and Wiemann,S.).
EST (Poustka,A., Wellenfeuther,K., Mewes,H.W., Weil,H. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi,
Mammalia, Eutheria, Primates, Catarthini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 458 TGAAGTICTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTGAA 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     394 pointereserGluAsni.culle_SerTyr-PheAsnAsnCysthiVal_AsnitiotysGl_413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       194 rTrpIleThrPheLeuLeuAlaLysGlyGluValLeuGlnMetGluAspAspReuValll 214
                                                                                                                                                                                                                                                                                                                          254 qArqGlyGlnAsnArqSerAlaArqIl@AlaLysOlnLeuGluAsnAspThrArqIleIl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           334 glacuPhatauAspHisAspLysThrlauGinihrAspserifeAspseriPhathrGL
214 eSerPheGInLeuMetLoufysValLeuAsplyrPhellelysLouSorProMetLo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              274 eCluValLcuCystysGluHisGluCysAsnIlcAspGluValLysAsnValTyrPheLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    354 nArgibativArgiysSerAsnbeuAspGluGluVaTAsnVaTIcitropronts.the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      374 OVALAEGTAFVALMETASATTATTLEGLAGLAUMETMETLELALASATASATAS
                                                                                                                     278 ITCATITCAGITAATGCIAIGIGCCTIGACTATITTAATAAACTCTACCATGIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Photyschaliys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      314 IGLUASnLeuSerLysArqTyrGluGlulleTyrLeuLysAsnLysAspLeuAspAlaAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ALS97811.1 GI:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            430 -- PheAlaLysAlaValGly 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       938 TECHGGGEAAAAGGGGGG 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Poustka A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHOPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COCOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                     90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ς
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ζ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ÷
                                                                                            Š
                                                                                                                                                90
                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                1001 bp mRNA linear EST 05-FEB-2002
ACAST OFFE EARLY OFFE THE SAME OFFE THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           // issue_type="methyoidal carcinoma, cell line"
// lab_bosl="DHIOB (phage-resistant)"
// lote_fordan: testis: Vector: pcMV-SPORT6: Site_l: NotI;
Site_2: Sall, Cloned unidirectionally; oligo-dT primed.
Average lusert size 2.5 kb. Library enriched for tull: frough clones and constructed by Life Technologies.
Note: this is a NHEMSC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
                                                          468 LeuserileGinAsnPheserLysLeuLeuAsnAspAsnIle PheHisMerSer-LeuL 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cONA Library Preparation: Lite Technologies, Inc. (TANA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) ONA Sequencing by: Ademourt Bioscience Corporation Clone distribution. MGC close distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              155 TyrAsspValLeuPheAlaLeuPheSorLysLeu-GluArgThrCyscluLeuIleTyrLe 174
723 CTTGGAGTLOGCTTGTALTACGGAGTAATGGAATGGTTAAATGAGAAGGGA 782
                                                                                   135 LeutyschulleAspIhrSerThrLysValAspAsnALaMetSerArqLeuTeutysLys 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98 TATGATGTATGTTTGGAGTGTTGAGGAAATTGGGAAAGGACAGGTGAAGTTATATATTT 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                174 uthreInProSerSerSerTleSerThrGlutTeAsnSerAlaLcutysValSe 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      48 CPCCGACTAAFTGAFACCAGTACCAAAGTFGATAATGCTATGTCAAGACTGTFGAAGAAG 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mammalia: Eutheria: Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             281
10
10
                                                                                                                                                                                                        Conservative:
Mismatches:
                                                                                                                                                                         487 cuAlaCysAlaLcuGluValValMctAlalhrlyrScr 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Plate: ULAM12326 row: f column: 04
High quality sequence start: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    48 09 026 459A 51 (1 928) x 8M475603 (1 1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /orqanism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zolone lib-"NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Caps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           High quality sequence stop: 734.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NIH MGP http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zelone-"IMAGE: 5575683"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xret="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: eqaphs ramail.nih.gov
Tissae Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualiflers
1. 1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BM475504.1 GI:18524545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.740 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1449.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94.87%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8 [ 6 ] 27
                                                                                                                                                                                                                                                                                                                                                                                                       5', mRNA Sequence.
BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   All spinion 1 Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Onery Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOUTOR
                                                                                                                                                                                                                                                                                                                                                                                  NOT LINITED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NK INCHA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PEFEFENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOHN HALL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORLS
                                                                                                                                                                                                                                                                                                                          HM475503
                                                                                                                                                                                                                                                                                              RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NICH N
                                                                                                                                                                                                                                                                                                                                                      50,00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \frac{\vec{\Xi}}{\vec{\Xi}}
```

15.4

17.4

76,4

* * 4

```
Heid∧'borg/Sormany) within the opNA sequencing consortion of the
                                                                                                                                Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKF7); Email s.wiemannadkf2- heidelberg.de,
sequenced by DKFZ (German Cancer Research Center,
                                                                                                                                                                                                                                                                                        Please contact the ESPS. Ecsecuterizantrum, Heabnerwey 6, 14659
Berlin-Charlottenburg, GERMANY; Email: clone@rzpd.de.
Tomarion/Qualifiors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        643 LysSerthrSerteuSerteuPheTyrLysLysValTyrArgl.cuAlaTyrLcuArgl.cu 662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       122 CITITCCAGCACCCCTGCAGAATGAGTAIGAACTCATGAGAGACAGGCATTIGGACCAA 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 743 LeulleLysGluGluGluTyrAspSerIleIleValPheTyrAsnSerValPheMetGln 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *6* ArglestystbrAssileteaChiTyrAlaSerThrArgProFroThrLeuSerProIle 782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           78.5 Profits HeproArgSerProTyrLysPheProGerSerProLouArqTheProGlyGly 802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                804 AsalletyrilleSerPreferiysSerPrefyriysileSertlyAlyLeyPreffrPre 822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             863 Asathri andyschuArqtauLausarchuHisProchuLauchHisthathatharphr 682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  683 LeuphedloHisThrLeudloAsoGluTyrGluLeuMctArqAspArqHisLeuAspGlo 702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 182 ATTATGATGTTCCAFGTATGGCATATGCAAAGTGAAGAATATAGACGTTAAAITGAAA 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (02) IIGAICAAASAAGAGGAGTATGATTGTATTATAGTATTGTATAAACTGGGTGTTGATGCAG 361
                                                                                                                                                                                                                                                                   This clone (DKFZp31300816) is available at the RZPD in Berlin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cort "Verter (Tiplex) Sivel Sila, Sivel convergence)
Max-Planck-Institute for Molecular Genetics
thnestrasse 73, 14195 Hotlin, Germany
Tel: -49-30-84131623
                                                                                       Email: poustka@mpimq-berlin-dahlem.mpg.de
This is the 5' sequence of the clone insert
                                                                                                                                                                                                                                                                                                                                                                                                                    /clone="bkkzpalaonal6"
/Slene_llt "?!? (synonya, llost)"
/dev_stage="adula"
/dev_stage="pulop"
/ser="two-trop if::plex2, Sire_l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         198 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches.
                                                                                                                                                                                                                                                                                                                                                                             /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US 09 026-459A:51 (1-928) x AL597811 (1-727)
                                                                                                                                                                                                                                                                                                                                                                                               /db_xref-"laxon.gknk"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           130 q
                                                                                                                                                                                                                                              No sl sequence available.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5.58e-115
1254.00
99.59%
99.59%
                                                                                                                                                                                                                            German Genome Project
                                                                .49-30-84131128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ]6]
c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26.148
                                                                                                                                                                                                                                                                                                                                                        1. .727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         238 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Omery Match:
                                                                                                                                                                                                                                                                                                                                                             SOUTTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HASE CARL
                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \tilde{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
```

```
PG222227
PG222227
PG222227
PG222227
PGG222227
PGG22227
PGG22227
PGG22227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukarycta: Metazoa: Chordata: Craniata; Vertebrata: Euteleostomi; Mammalia: Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 880) NIH MGC http://mac.ori.nih.qev/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note "Organ: tostis; Vector: pGNV SPORTS; Site_1. Not: Site_2: Sall; Cloned unidirectionally; oliqo-dT primed. Average inset; size 2.5 kb. Library enriched for full-length clones and constructed by Life Technologies. Note: this is a NHH MGC Abrary."
                                                                     coRA Library Freparation. Life Technologies, Inc. cNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by. Apercourt Bissociated Corporation Clone distribution. MC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
482 AACATCTATATTTCACCCTGAAGAGTCCAIAIAAAATTICAGAAGGTCTGGCAACACCA 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              157 ValleuPheAliLeuPheSerLysLeuGluArqThrCysGluLeuIleTyrLeuThrGln 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              National Institutes of Health, Mammalian Gene Collection (MGC)
                                            823 ThrLysMctThrProArgSerArgileLcuValSerTleClyGluSerPheGlyThrSer
                                                                                                                                 843 GluLysPheGlnLysIleAsnGlnMetValCysAsnSerAspArqValLeuLysArqSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib-"NiH_MCC_92"
/tissuc_type-"emblyonal carcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 http://image.llnl.gov
Plate. LLAM13279 i.w. i column: 20
High quality sequence stop: 606.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-026-459A 51 (1 928) x RQ12117 (1-880)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="IMAGE:6041563"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5222217.1 61.23483627
BST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.18e-113
1236.50
92.88%
90.75%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Cimilarity.
                                                                                                                                                                                                                                                                                                               883 AspClu 884
                                                                                                                                                                                                                                                                                                                                                         722 CATICAA 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N ... . . . . . . . . . . . . . . . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VEF-1.N
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                          # BQ222227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SILOUI
                                                                                     q
                                                                                                                                      ò
                                                                                                                                                                                                                                                                   DP:
```

```
linear EST 05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGENCOURT 6402743 NIH_MCC_72 Home sapiens clana clone IMACE:5528814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryola; Metazoa; Chordata; Craniata; Vertebrata; Eutheleostomi;
Mammalia; Eutheria: Primates; Catarrhini; Hominidae; Hemo.
1 (bases 1 to 845)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            217 CintroMetizoCysValizouAsplyrPhelletysLeuSerProProMeticaLeuigs 236
                                                                                                                                                                                          101 CAGAACAGGACI GCACGGA I AGCAAAACAACI AGAAAATGATACAAGAA ITTATTGAAGTT 360
                                                                                                                                                                                                                                                                                                                                                                                   277 LouCystysolaHisGluCysAsniloAspOnVallysAsnVallyrPhotysAsnPho 296
                                                                                                                                                                                                                                                                                                                                                                                                                       461 CTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTATTTCAAAAATTTT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                          297 TEOPTOPHOMOTASISCITICALITY (PEROTASI PEROTASI PEROTASI 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   337 LegAspHisAspLysThrLegGluThrAspSerIleAspSerPheGluThrGlnArgThr 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541 TIGGATGATGATAAAAGICIICAGAGIGATIGIAIAGAGAGITITGAAAAGAGAAGA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     357 ProArqLysSerAsnLeuAspCluCluValAsnVallleProProHisThrProValArg 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        377 ThrValMetAshThrIleGlnGlnLeuMetMetIleLeuAshSerAlaSerAspGln-Pr 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661 ACTISTIATGAACACATTAATGATGATTTTAAATGCAGCAAGTGAACAACC 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                996 oSetGluAsuLeuTle-SetTyrPheAsnAsnCysThrValAsn---ProLysGluSer1 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   National Institutes of Health, Mammalian Gene Collection (MGC)
1 GTATTGTTTGCAA'TCTTCAGCAAATTGGAAAGGACATGTGAACTTATATATTTGACACA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 415 Telen - TysArqVallysAsplieClyTyrllePhe---- LysGluLysPhe 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         197 ThrPheLeuLeuAlaLysGlyGluValLeuGlnMetGluAspAspLeuValIleSerPhe
                                                                                                                                                                                                                                                                              257 GluAsnArgserAlaArgTleAlaTysGluLeuGluAsuAspThrArgIleIleGluVal
                                                                                                                                                                                                                                                                                                                              835 bp mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (1999)
Pontact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NIB MGC http://mac.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BM454724.1 GI:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mBNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HM45 47 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NOT LINITED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOHNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HM45 4724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LNEWMOO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3.36.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Silver
                                   5
                                                                  =
                                                                                                                                     =
                                                                                                                                                                                                                                                                            Ē
                                                                                                                                                                                                                                                                                                                                              <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>-</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                          5
                                                                                                                                                                                                       =
                                                                                                                                                                                                                                          \stackrel{>}{\sim}
                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
```

Email: egaphs ramail.nih.gov Tissue Procurement: ATCC/DCTD/DTP

```
/ordanism="nounc corp...
/db_xrel="taxon:9606"
/clone_lib="NuH_MGC_72"
/clone_lib="NuH_MGC_72"
/rissuc_ype="mclanotic mclanoma"
/lab_host="mulhUH (phage resistant)"
/note="Ordan: Skin; Vector: pcMV-Spowl6; Site_1: Not1:
Site_2: Sall; Cloned unidirectionally. Primer: oliqo dr.
eDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.S.E. Consortium (LLNL) INA Sequencing by: Appropriate Posterior Corporation Clone distribution: MC clone distribution; MC clone distribution intermation can be found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          590 CysProLeuAsnLeuProLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerPro 609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            510 ValArgSerProLysLysLysClySerThrThrArgValAsmSerThrAlaAsmAlaGlu 629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             670 LeaSerGluHisProGlubeuGluBisHeileHefhelPhhbeuPhedinBisThrLeuGlm 689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             428 AATGAGTATGAAGTGATGAGAGAGAGAGTTTTGGAGTAAA11A1GALGTGTTGGTGTTT 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        488 GGCATATGCAAAGTGAAGAATATAGACCTTAAATTCAAAATCATTGTAACAGCATACAAG 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               730 AspicentrollisAlaValtinGluThrttheitysArgValteurleitysGlufflurfyr 749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 550 LeuGluArqCysCluHisArglleMetGluSerLeuAlalrpLeuSerAspSerProLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        570 PheAspLeuIleLysGlnSerLysAspArqGluGlyProThrAspHisLeuGluSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                188 GTAAGATCTCCAAAGAAAAAGGTTCAACTACGCGTGTAAATTCTACTGCAAATGCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       630 ThrGlnAlaThrSerAlaPheGlnThrGlnLysProLeuLysSerThrSerLeuSerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  650 PheTyrLysLysValTyrArqLeuAlaTyrLeuArqLeuAsnThrLeuCysGluArqLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        590 AsnGlaTyrGluLeaMetArqAspArqHisLeuAspGlulleMetMetCysSerMetTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   710 GlylleCystysValtysAsnileAspLeutysFheLyclleTleValThrAluTyrLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lothers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                         137 q 234 t
                                                                                                                   Plate: LLAM12205 row: e column: 07
High quality sequence stop: 647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lengt h:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 indels:
                                                                                                                                                                          l. .835
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (Japs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-026 459A 51 (1 928) x BM453724 (1 845)
                                                                                                                                                        Location/Qualifiers
                                                                                                 http://image.llnl.gov
Plate: LLAM12206 row:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.77e - 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1208.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92.918
91.048
25.188
                                                                                                                                                                                                                                                                                                                                                                                         210 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
Ouery Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                         HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.:
                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ٠<u>٠</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ĉ٠
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ô
```

```
òγ
                                                                                                                                                                                             급
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ت
                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BM450031 1023 bp mRNA linear EST 05-FEB-2002
ACENOCOPT 6303644 NIH M30,72 Home Sapiens eRNA elega IMAGE 5528037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_"IMAGE.72"
/clone_lib="NIE_MGG_72"
/clone_lib="NIE_MGG_72"
/clone_lib="NIE_MGG_72"
/clone_lib="NIE_MGG_72"
/clonelib="NIE_MGG_72"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota: Metazoa, Chordata, Cramiata, Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates: Catarrhini Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    classic Procurement: ArcC/DCID/DTP CDNA Library Preparation Tife Inchestages, Inc. Consortium (LLNL) CDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL) DNA Sequencing by. Agencourt Bloscience Corporation Clone distribution information can be found through the I.M.A.G.B. Consortium/LLNL at:
                                    + +8 -3ATICTALIATAGLATICETATAACTEGGICTTCATGCAGAGAGAAAQAAATATTTG 667
750 AspSerIleIleValPheTyrAsnSerValPheMetGlnArgLeuLysThrAsnIleLeu 769
                                                                                                                                                 770 JintyrAlaSerthrAigProPro ThrheuSerProfleProHisfle-ProArgSe 788
                                                                                                                                                                                                                              168 CAGIAIGCIICCACCAGGCCCCTACCCIIGICACCAANIACCICACATITCCICGAAG 727
                                                                                                                                                                                                                                                                                                              748 throlyttys---PheproserScrProteu---Argilepro---GlyGlyAsn---- 803
                                                                                                                                                                                                                                                                                                                                                                                   7.28 ACCCITACAAGTTTFCCCFFAGTTFFCACCCFFFFACGGAAFTCCCFGGGAAGGAACCAFCC 787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 1023)
MIHTHARY Hitp://mar not nih gov/
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7.2 WisAlaValGlnGluThrPhalysArgValLeuIleLysGluGluGluGluTyrAspSerIle 752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 AAAGIGAAGAATATAGAGGTTTAAATTGAAAATGTAACAGGATACAAGGATGTTGTT 61
                                                                                                                                                                                             216
0
0
0
                                                                                                                                                                                                                                                                                                                                                       <u>-</u>
-
-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          http://image.limi.gov
Plate: LIAM12204 تعمر 1 ممانيس. 22
High quality sequence stop: 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                281 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Robert Strausberg, Ph.D. Email: cqapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism "Homo sapiens"
/db_yrof "tavon-9406"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-04-026-459A-51 (1-928) x BM450031 (1-1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location /enalitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                197 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                804 -IleTyrileSerProLeuLys 810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         788 IATALLILICAACCCCTGGAA 809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HM450031.1 G1:18499071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.94e - 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1111.00
106.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2111 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tap-delished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23.168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Home suplend
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Rest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BM450031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    пишап,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QUERY Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OFGIANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE CHUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fred. No. :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSI N
KEYW PES
SHIRKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEFEREN'E
AUTH-RS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOHNNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BM4 50031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N.IWW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N. (1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SCOFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COURS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                       £
```

```
AI646038 aRNA linear EST 29-APR-1999
W549410.1 Solice_mammary_dland_MMLMS Museulus CRNA clone
IMARE-1947610 3' similar to 3b:M25391 Mouse relinoblastoma
susceptibility protein (MOUSE); mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
Fakaryota, Motazba, Chordata, Chaniata, Vertebrata, Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 832)
MCL COAF http://www.ncbi.nim.nih.gov/ncicqap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This clone was previously sequenced on the 5' end only, this new data is from the 3' end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This close is available royalty free through LLNL, contact the IMAGE Consortium (info@image.llnl.gov) for lurther intormation.
                                                                                                                                                                                                                                                           753 IleValPheTyrAsnSerValPheMetGlnArgleulysThrAsnlleLeuGlnTyrAla 772
                                                                                                                    122 ATAGTATTCTATAACTCGGTCTTCALGCAGAGTGAAAACAAATATTTGCAGTALGCI 181
                                                                                                                                                                 773 SerThrArgProProThrLeuSerProIleProHisileProArgSerProTyrLysPhe 792
                                                                                                                                                                                                                182 PECACCAGGCCCCTACCTFGFCAATACCFFCACAFTCCTCGAAGCCCTFACAAGTTT 241
                                                                                                                                                                                                                                                                                                                                                            813 TyrtysfleSerGluGlyLeuProThrProThrLysMetThrProArgSerArglleLeu 832
                                                                                                                                                                                                                                                                                                                                                                                                           302 TATAAAAITICAGAAGGICTGCCAACCAACAAAAAIGACICCAAGAICAAGAATCITA 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                     833 VilSerIleGlyGluSerPheGlyThrSerGluLysPheGluLysIleAsnGluMetVal 852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              542 GGAGAGTCCAAATTTCAGCAGAAACTGGCAGAAATGAGTTGTAGTCGAACGAGGAATGCAA 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          602 AABGABAAAA BAAA BAAA BAAAA GAAAA GAAAA 649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   912 LysGlnLysMetAscAspSerMetAspThaSerAsnLysGluLys 928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /Organism."Mus.musculus"
/db.xrof="taxon=10090"
/clone="IMAGE:1247610"
/clone=lib="Soares_mammary_gland_NMLMG"
/sex="femile (lactating)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Possible reversed clone: polyf not found
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stop: 482.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: cgapbs-rêmail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ā1646038
A1646038.1 CI:4724513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tumor Gene Index
Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MGI:661298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A1545038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
```

```
721 AGCGCICTGATAGCAAACCAACTAGA-AATGATACATGATTATCGAGTT CTCTGTAA 777
                                                                                                                                                                                    DEFINITION
                                                                                                                                         AA763411/C
                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                  ACCESS 10N
                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                 SHOOT
                                            à
            /lab host "Uperior: pf7740-pac (Phormacia) with a modified forth a modified polyliuker: 1st strand cDNA was prepared from mannary qland tissue from a lactating tenale, and was then primed with a Not I - oligo(dI) primer. Double-stranded cDNA was lighted to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pf774 vector. Library is normalized. Library was constructed by Bento Soares and M. Falima Bonaldo."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100 GlylleCystlePhetleAlaAlaValAspLeuGlyAspMetSerPheThrPheThrGlu 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      65 ACTAGLACCAAGGI IGATAA IGCI ATGTCAAGACTATTCAAGAAGTATAA IGTGTTATGT 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .50 AlaloupheserlysLeugluArqThrCysGluLeuIleTyrLeuThrGluProSerSer 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180 SertleSerthrGluffeAsnSerAlaLeuValLeuLysValSerTrpffeThrPheLeu 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4H2 GOGITATOTACTGAAATAAATTGITGGIGCIAAAAATTTCTIGGAICACTTNITA 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   200 JouAlaLysGlyGluValLeuGlnMetGluAspAspLeuVallleSerPheGlnLeuMet 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  220 Test/ysVallestAspTyrPheTTeLysLestSerProProMetLestLestJysGTsPrCTyr 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240 1/ysthrAlaVallTeProlleAsndTySerProArdThrProArdArdGTyGInAsnArg 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661 ANAACAGWTGCATCCCCATTAATGGNTCACCTCGAACACCCAGAAGAAGTCAGAACANG 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               260 SerAlaArgileAlatgSClnLeuGluAsnAsp1hrArgileIleGluValLeuCysLys 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120 tendintysAsnileGluffeSerValHistysPhePheAsnicut.outysGluffeAsp 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122 TTATGTCAAAAGTTAAAGGTACCCGATCATGTCAGAGAAAAAGGGCTTGGCTAACTTGGGGAG 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60 leutystlitystautystleProAspRisValArgCluArgAlaTrpLeuThrTrpGlu 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20 ProProAlaProProProProProProProGluGluAspProGluGluAspSerGlypro 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40 GluAspLeuProLeuValArqLeuGluPheGluGluThrGluGluProAspPheThrAla 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                               Mismatches:
/tissue type "mammary qland"
                                                                                                                                                                                                                                                                                                      Matches:
                                                                                                                                                                                                                                                                                                                                                             Indels:
Caps:
                                                                                                                                                                                                                                                                                     Length:
                                                                                                                                                                                                                                                                                                                                                                                                                           US 09 026 459A 51 (1 928) x A1646038 (1-832)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1,44+-98
1091,00
87,81%
                                                                                                                                                                                                                                                                                                                                            81.008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hest Local Similarity:
                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                              Albemment Scores:
                                                                                                                                                                                                                                                                                                                                                       ouery Match;
DB:
                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                                                                                                                                     Fred. No.:
                                                                                                                                                                                                                        N ... Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>2</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
```

```
Afab_nost__number

Afab_nost__number

Afab_nost__number; Ist strand cDNA was prepared from mammary

polylinker; Ist strand cDNA was prepared from mammary

dand tissue from a lactditud temmale, and was then primed

with a Not I = oliqo(dT) primer. Double stranded cDNA was

ligated to Eco RI adaptors (Pharmacia), diarstred with Not

and cloned into the Not I and Eco RI sites of the

madified pT2T3 vector. Library is normalized. Library

was constructed by Bento Soares and M. Fatima Bonaldo. "

a 178 c told of 261 of a lothers."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 914)
Marra.M., Hillier.L., Allen.M., Bowles,M., Dietrich.N. Dubnque,T.,
Gelsel,S., Kucaba,T., Lacy,M., Lack, Marris,M.,
Schellenberg.K., Steptow.M., Tan,F., Underwood,K., Moore,R.,
Theising,B., Wylie,L., Lennon,G., Soares,B., Wilson,K. and
                                                                                                                                                                                                          EST 27 JAN 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota, Metazoa, Chordata, Craniata, Verteteata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                              VW54a04.rl Scares_mammary_dland_NMLMs; Mus_nus_clus_clnn_clonn_clnn=
IMAGE.1247598_5' similar to qb:M15406 RETINGHLASTOMA_ASSOCIATED
PROTEIN_(HUMAN); gb:M26391 Mouse_retinoblastoma_susceptibility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This clone is available royalty-free through H.N.; contact the IMAGE Consortium (info⁴image.llnL.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               336 PheleuAspHisAspLysThrLeuGlnThrAspSerIleAspSerPheGluThrGlnArg 305
280 GludisGlacysAsnileAspClaVallypAavValTyrDachyAarFacHeffe, 298 [HILLIDH] [HILLIDH] [HILLI]
                                                     . 778 GAACACGAGTG AATATAGATGAGGTGAAA - ATGTTATTTCAAAAAATTATACCT B 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4444 Forest Park ParkWay, Box 8501, St. Louis, Mo 64108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib-"Soares_mammary_aland_NMLMG;"
/sex="lengle (lactaling)"
/tissuc_type="mammary qland"
/lab_bost="HH10#"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WashU-HHMI Mouse EST Project
Washington University School of Medicinep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Seq primer: -28ml3 rev2 ET from Amersham
High quality sequence stop: 422.
Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
Mismatches:
                                                                                                                                                                                                      REKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Inde is:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus_musculus"
/db_xret="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The WashU-HHMI Mouse EST Project Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                      protein (MOUSE);, mRNA sequence.
AA763411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-026-459A-51 (1-928) x AA763411 (1-914)
                                                                                                                                                                                                          914 1/10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone-"IMAGE:1247558"
                                                                                                                                                                                                                                                                                                                                                                                                AA763411.1 GI:2813158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4,72c-95
1056,50
82,14%
75,97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  $20.02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Source
```

```
AL564757 AL6-PEB-2001 ARC4 Homo sapieus cDNA cloue csoppon7YAns 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota, Metazoa, Chordata, Craniata; Vertebrata, Euteleostomi;
Mammalia; Eutheria; Primates; Gatarrhini, Hominidac, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           456 [hrproArgLysSerAsnLeuAspGluGluValAsnVallIeProProHisThrProVal 375
                476 ArgibrValMetAsnThrileGinGinLeuMetMetileLeuAsnSerAlaSerAspGin 395
                                                                                                +16 ProserGlaAsnLealleSerTyrPheAsnAsnCysThrValAsnFreLysGlaSerIle 415
                                                                                                                                                   6.22 PPAGGO BAGGALGGGAGTAGAGGGATATAAACTTTGAGGGGGGTGGGTTAGGGTT 563
                                                                                                                                                                                                                                                                                                                                      456 ValMetGluSerMetLenLysSerGluGluGluArgLeuSerIleGluAsnPheSerLys 475
                                                                                                                                                                                                                                                                                                                                                      476 LeuLeuAsnAspAsnIlePheHisMetSerLeuLeuAlaCysAlaLeuGluValValMet 495
                                                                                                                                                                                                                                                                                                                                                                                                                         496 AlaihriyrSerArgSerThrSerClnAsni.cuAspSerClyThrAspl.euSerPhePro 515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           916 IrplleLeuAsaValLeuAsaLeuLysAlaPheAspPheTyrLysValIleGluserPhe 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             556 ArqileMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeufleLysGln 575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               576 SerLysAspArgGluGlyProThrAspHisLeuGluSerAlaCysProLeuAspLeuPro 595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6.16 LysGiyserThr1hrArgVa1AsnSerThrAlaAsnA1aG1uThrG1nA1aThrSerA1a 635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .45 CICCAGGGTAAFFATAFFGTGTAGAGATATGTATFTTFTGTTFTAAGATGICCAAAGAAA 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   436 PheGlnThrGlnLysProLeuLys 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25 TIGGATACTCAGAAGCCATTGAAA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ALS63757.1 G1:12913464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                prime, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mm sabiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ALS6 57:770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RFS71 : 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWARDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSIEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SILVE
                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                    <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ៊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
```

```
Anote "Gryan. Brain, Vector. poMysions 6, 1st strand cDNA was primed with a NotL-ollyo(d)) primer. Five prime end enriched, double-stranded cDNA was discrete with Not 1 and cloned into the Not I and For BV sies of the pcMysions of sector. Library was normalized. Library was constructed by Lite Technologies. Contact. Fend Liand Lite Technologies. Contact. Fend Liand Lite Technologies, and printing the Addical Center Drive Rockville, Maryland 200850, USA Fax: (1) 301 610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360 SerAsnLeuAspGluGluValAsnVallleProProHisThrProValArqThrValMet. 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              791 AAAACAGCTKTTATACCCATTAATGGTTCAACTCGAACAGCCAGGCGAGGTCAGAACAGG 732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               260 SerAlaArgileAlaLySGlnLeuGluAsnAspThrArgileIleGluValLeuCySLyS 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              671 GAACAIGAATGIVATAIASWIGAGGIGAAAAAIGIIIWIIICAAAAAIIIIAIACIIII 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300 MetAsnSerLeuGlyLeuValThrSerAsnGlyLeuProGluValGluAsnLeuSerLys 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        551 CGATACGAAGAAATTTTTTTTAAAAATAAAGATCTAGATGCAAGAITAITITIGGWICAT 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80 AsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAspGlnProserGluAsn 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 460 iculieSerTyrPheAsnAsnCysThrValAshFroLysCluSerHleheuLysArgVal 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          280 CluffsCluCysAsnIleAspCluValLysAsnValTyrFhcLysAsnihcHeffeffethe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                340 AsplysThrLeuGInThrAspSerTleAspSerPheGTuThrGInArgThrProArgLys
                                                                                                                                                   Email: segref@genescope.ens.fr, Web : www.genoscope.ens.tr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26 others
             Li.W.B., Gruber, C., Jessee, J. and Polayes, D. Full-length cDNA libraries and normalization copublished (2001)
                                                                                                                                                                                                                                                                                                                  /tissue_type "neurchlastoma cells"
/lab_host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      http://lulllength.invitrogen.com"
                                                                                                       Centre National de Sequencage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
                                                                                                                                                                                                                                                                        /clone_lib="LT1_NFL001_NHC4"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        255 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
                                                                                                                                                                                                                 /organism-"Homo sapiens"
                                                                                                                         BP 191 91006 EVRY cedex - France
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-026-459A-51 (1-928) x AL563757 (1-792)
                                                                                                                                                                                                                                      /db_xref-"taxon:9606"
/clone-"CSODD007YA05"
                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11.7 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8.66-94
1043.00
84.538
81.898
1 (bases 1 to 792)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             148 C
                                                                                Contact Genoscope
                                                                                                         Genoscope -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
                                                                                                                                                                                               somes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
REFERENCE
                  AUTHORS
                                                              JOHENAL
                                  TITLE
                                                                                                                                                                        FEATURES
                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>÷</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ें
```

```
605 bp mRNA linear EST 14-AUG-2001
DRFZp413F992-r1 619 (symonym: Alee2) Homo sapicus cDRA clone
DRFZp413F992-57, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          clone from S. Witchmann, Molecular Genome Analysis, German Cancer Besearch Center (UME2): Email s.whemnowskiz heidelberg de: sequenced by BMEZ (Biomedical Research Center at the Charite Herlin/Germanny) within the CDNA sequencing consertion of the German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota: Metazoa: Chordata: Craniata; Verfebrata; Buteleostomi;
Mammalia: Potberia: Primates: Catarchini: Homimidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           //orte="Vortor: pTriplEx2; Site_1: SfilA; Site_2: SfilB; cDNA collection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Please contact the RZPD: Ressourcentrum, Heubnerweg 6, 14059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ESI (Kochror, K., Reyer, A., Mewes, H.W., Weil, H. and Wiemann, S.)
Unpublished (1999)
Cantael: Kochref K.
                                                               420 Lychapil+clytyrilePhetysGluLysFheAlaLysAlavalGlyClnGlyCysval 439
                                                                                      111 YEGITTICYEWITTIFACIACTICCACAGIGAATCCAAAAGAAACTATACTIGAAAAGAGTG 252
                                                                                                                                                     440 GluffedlySerGlnArdTyrLysLeuGly--ValArqLeuTyrTyrArqValMetGluS 459
                                                                                                                                                                                               191 GANATIGGATCACACACATACANACITGGITGITTCGCTTGTATTACCGAGTANIGGAAT 132
                                                                                                                                                                                                                                           459 er Met Leutys Ser Gluchuchutzgleus er Hechnashbeser Lysteutzunasn - 478
                                                                                                                                                                                                                                                                                                                                    479 AspAsnilePheHisMetSerLeuLeuAlaCysAlaLeuGluValValWetAlaThrTyr 498
                                                                                                                                                                                                                                                                   No st sequence available,
this clone (DEPZF ***) is resitable at the PZPP in Berlin
1 (bases 1 to 60%)
Kochter,K., Beyer,A., Mewes,W., Weil,B. and Wiemann,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Herlin Charlottenburg, GERMANY; Email: clonewrzpd.de.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Am Klopterspitz 18a D 82152 Martinsried, Germany
This is the 5' sequence of the clone insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib "ili (synonym: hlee2)"
/dev stage="addit"
/lab host="bH10#"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /orqanism="Homo sapiens"
/db_xrot="taxon;9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /elone-"DKFZp313P092"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       106 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Localion/Onalifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ALS99643.1 GI:15162921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.36.93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21.61%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genome Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                      499 SerArdSer 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11 GCACTAAGT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AL599633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                - KGAN I SM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE CHINT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PESULI 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KELKEKEN, E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AL539633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RISIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0.100%
                                                                                                                                                                                                                                                                                   £
                                                                                                                                                                                                                                                                                                                                                                            â
```

```
EST 12 JUN 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
Ammunalia; Eutheria; Primates; Cafarrhini; Hominidae; Homo.
1 (bases 1 to 694)
Dias Neto, E., Garcia Correa, R., Verjovski Almenda, S., Briones, M.K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nagai,M.A., da Silva,W. Jr., Znao,M.A., Hordin,R., Posta,P.F.,
Coldman,G.H., Carvelho,A.F., Matshidma.A., Raria,G.S., Simpson,D.H.,
Brunstein,A., deGoliveira,P.S., Hurcher,P., Jongeneck,C.V., O'Haro,M.J., Soares,F., Brentani,R.K., Reis,L.F., de Sou,a,S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BE082846 Linear EST 12 JUN 2007 RC2 BT0642 Rolle Sapietas COMA, mcNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Laboratory of Cancer Genetics
Eudwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-(10, Sao Paulo SP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Shotgun sequencing of the human transcriptone with oRF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                              00.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          76,5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₹.,∤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              395 GluProSerGluAsuLealleSerTyrFheAsaAsarysThrValAsaProLysGluSer 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421 ATACTGAAAAGAGTGAAGGATATAGGATACATCTTTAAAGAGAATTTG/TAAAG/TGTG 480
                                       61 AATTITATACCITITATGAATTOTCTTGGACTTGTAACATCTAATGGACTTGCAGGGTT 120
                                                                                                                                                                                                                      415 GluAsnLeuSerLysArgTyrGluGluIleTyrLeuLysAsuLysAspLeuAspAlaArg 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        461 CAACCTTCAGAAAAFCTGATTTCCTATTTTAACAACTGCACAGTGAATFCCAAAAGAAAGT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  415 HeteutysArgValtysAspHeGlyTyrHePhetysGlutysPheAlatysAlaVal 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          435 GlyGlmGlyCysValGluIleGlySerGluAraTyrLysLeuGlyValArdLysTyr 454
                                                                                                                                295 AsnPhelleProPheMetAsnSerLeuGlyLeuValThrSerAsnGlyLeuProGluVal 314
                                                                     335 LeuPheLeuAspHisAspLysThrLeuGluThrAspSerlleAspSerPheGluThrGlu
                                                                                                                                                                                                                                                                                                                                                                                                  355 Argihr ProArgiysser Asnicu AspGiudiu Val AsnVal HeProProProHisthm Pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        475 ValArqThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAldSerAsp
                                                                                                                                                                                                                                                                                                                                                      181 TTATITITICGATCATGATAAAACTCTTCAGACTGATTGTATAGACAGTTTTGAAAGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                       801 GPTAGGACTGPTATGAACACTATCCAACAATTAATTGATGATTTTTAAATTCAGTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
                                                                                                                                                       US-09-026-459A-51 (1-928) x AL599633 (1 605)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BE082846.1 GI:8474151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BE082846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20202663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    475 Lys 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601 AAA 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BE082846/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIT INE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SILIMOMALIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.0CUS
                                                                                                                                                                         qq.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                      g
                                                                                                                                  Ś
                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
```

Brazil

```
Melton, D., Meadows, A., Clitton, S., Hillier, L., Marra, M., Pape, D., Mylie, T., Martin, J., Blistain, A., Schmitt, A., Theising, R., Ritter, Wylie, Ponce, I., Cardenas, M., Sikens, M., Mosan, R., Care, Y., K., Tsagareishvili, R., Williams, F., Jackson, Y., and Howers, Y.
                                                                                                                                                                                                                                                                                                  EST 13-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Libraties were constructed by Dr. Douglas Melton
DNA sequencing by, Washington University Genome Sequencing Center
For information on obtaining a clone please contact; Juliana Brown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /notc-"Organ: Pancreas; Vector: pSPORII; Site_1: Not 1:
Site_2: Sal 1: Library constructed using SuperSeript
Plasmid Library kit (Life lechnologies). CNNA made by
Cligo dT priming Size selected by calumn fractionation:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Harvard University, Howard Hughes Medical Institute Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
Eukatyeta; Metamoa; Chordata; Craciata; Vertebrata; Buteleostomi;
Mammalla, Eutheria, Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This sequence now available from the IMAGE consortium, for clone orders contact: info@image.llnl.gov
                                                                                                                                                                                                                                                                                                                          ialin99.yl Human Pancreatic Islets Homo sapiens cDNA clone
IMAGR:5638049 5' similar to gb:M15400 RELHNORLASIOMA-ASSOCIALED
PROTEIN (HUMAN): gb:M26391 Mouse retinoblastoma susceptibility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27] ThrArgile:leGluValLeuCystysCluHisGluCysAsmileAspCluValLysAsm 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (2000)
Contact: Douglas Melton, Klaus H. Kaestner, s Hiroshi Inoue
   cligo di primita - Size selected by column fro
average insert size 1.08 kb. Primary library,
upamplified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 others
                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib="Human Pancreatic Islets"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /tissue_type."Islets of Langerhans"
/dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
                                                                                                                                                                                                                                                                                                     HENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      186 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WashU-Harvard Pancreas EST Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: dmelton@biohp.harvard.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-D4-026-459A-51 (1-928) X AWS#3181 (1-623)
                                                                                                                                                                                                                                                                                                                                                                                                                             profein (MOHSE); mRNA sequence.
AW583181
AW583181.1 G1:7260125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Seq primer: 40RP from Gibco
High quality sequence stop: 430.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                               623 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zelone-"IMAGE:5638049"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Endocrine Pancreas Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /lab_host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (brown@fas.harvard.edu)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3.05e-91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1016.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      93 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97.10%
21.18%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tel: 617-495-1812
Fax: 617-495-8557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hest Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MA 02138
                                                                                                                                                                                                                                                                                                  AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OPGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                 RESULF 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWOPDS
                                                                                                                                                                                                                                                                AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VEPSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 02005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred.
                                                          Email: asimpsondludwiq.orq.br
This sequence was derived from the FAPESP/LICE Numan Cuncer Genome
Project. This entry can be seen in the following URL
(http://www.bidail.ed/fixeripts/ge-htel2_p19ff atp. RfQE42e210
200 011 c06st3-2000_02_21$t4-1)
                                                                                                                                                                                                                                                                                                                                                                                                            /db xice="lawnows open colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to the colored to th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    into the put 18 vector Peverse transcription of tissue mRNA and cDNA amplification were performed under low
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              406 AsnCysThrValAsnProTysCluScrileLealysArgValLysAspileClyTyrtle 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           446 TyrLysLeadlyValArgLeuTyrTyrArgValMetGluSerMetLeuLysSerGluGlu 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          466 GluArdLeuSer HedinAshPheSerLysLeuLeuAshAshAshFlePheHisMetSer 485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   486 LeuLeuAlaCysAlaLeuGluValValMetAlaThrTyrSerArgSerThrSerGlnAsn 505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      477 CIIGALICIGGAACAGAITAGICITICCCAIGGAITCIGAAIGIGCITAAITIAAAAGCC 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 726 Physicity is year include Phetherys Alactucity Springer Phethery S45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                546 MetIleLysHisLeuGluArqCysGluHisArqIleMetGluSerLeuAlaTrpLeuSer 565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  566 AspSerProLeuPheAspLeuIleLysClnSerLysAspArqGludlyProThrAspHis 585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               676 CACTGCACAGTGAT-CCAAAAGAAAGTATACTGAGAAGAGTGAAGGATATAGATACATC 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         426 PheLyssiulysPheAlalysAlaValGlyGlnGlyCysValGlulleGlySerGlnArq 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        586 LeuglüserAladystrolouAsmicu ProteuglinAsmAsnHisThrAlaAspMc 605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    226 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                                                                                                                           /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     stringency conditions."
                                                                                                                                                                                                                                                                                           High quality sequence stop: 669,
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             226-459A-51 (1-928) x BE082846 (1-694)
                                                                                                                                                                                                                                                         High quality sequence start: 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       127 3
                                                                                                                                                                                                                              Seq primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.42e-92
te:: -55-11-2704922
Fax: -55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1030.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96.33%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       129 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .478
                                                                                                                                                                                                                                                                                                                                                         1694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ... .cocal Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HASE CHINI
                                                                                                                                                                                                                                                                                                                             PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \stackrel{\ge n}{\supset}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \stackrel{>}{\sim}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ĩ
```

```
MG1:661354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                           Source
                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No.:
                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST 27-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Marta.M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Acisel,S., Kucaba,L., Lary,M., Lary,M., Martis,J., Morris,M., Steptoe,M., Martis,J., Moore,B., Steptoe,M., Lan,F., Underwood,K., Moore,B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia, Eutheria: Rodentia, Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleosfomi,
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleosfomi, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 vw54h01.rl Soares_mammary_qland_NMLMG Mus musculus cDNA clone
IMAGE:1247665 5' similar to qb:M15400 RETINORLASIOMA-ASSOCIATED
PROTEIN (HUMAN); qb:M26391 Mouse retinoblastoma susceptibility
                                                                                                                                              410 ylamProdluValGluAsntauSertysArqfyrGluGlufredyrLeuLysAsntysAs 330
                                                                                                                                                                                                                                                                                                                                                                                                                123 TOCAAAAGAAAGTATACTGAAAAGAGTGAAGGATATAGGATACATCTNTAAAGAGAAATT 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.49 eAlatysAlaVatG1yStaC1yCysVatG1u1tC1ySetG1nAryTyTtysLcuG1yVa 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       450 lArqLoufyrTyrArqValMetGluSerMetLeuLysSerGluGluGluArqLeuSer11 470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           291 ValTyrPbeLysAsnPholloPriPbeMetAss SerteuGlyteuValTbiSerAssGl 310
                                                                                                                                                                                                                                                                                                             450 rPheGluThrGlnArqThrProArqLysSerAsnLeuAspGluGluValAsnValllePr 370
                                                                                                                                                                                                                                                                                                                                990 nScrAlaSerAspGltdProSerGluAsnLeutleSerTyrPheAsnAsnCysThrValAs 410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            410 nProLysaluSerfleLeufysArqValLysAspiledlyTyrileFheLysGluLysPh 430
Setellenberg,K., Steptoe,M., Tan,F., underwood,A., room, the tring, H., Wylie,T., Lennon,G., Soares,H., Wilson,K. and
                                                                                                                                                                                LA CANTESSANGGITSANAATGITTGIAAASSATAGGAAGAAATTTATGITAAAAATAAAAGA
                                                                                                                                                                                                                             440 plouAspAlaArqLouPheLouAspHisAspLysThrLouGlnThrAspSerTleAspSe
                                                                                                                                                                                                                                                                                                                                                                                             370 OPTOHISTNEPTOVALAFGINEVALMETASBINET HEGINGINDOUMETMET HELOUAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 483 TO LIAAAA LIGI GGAACAGGI IGI GI GI GAAATTTOATCAGGGATACAAAOTTGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4444 Forest Park Parkway, Box 8501, St. Louis, Mo 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Washington University School of MedicineP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ⊞RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Marra M/Mouse ESI Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: mouseest *watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein (MedSE);, mena sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The Washii HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                871 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Washu HHM1 Mouse ESI Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA764485.1 GI:2813232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         470 eGlnAsnPheSerLysLeu 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             603 1CAAAAIIIIAGCAAACII 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          414 286 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fax: 414 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA763485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA764485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA76.44857c
Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CKCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HITKNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WME.N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 王 <u>第</u>日天
                                                                                                                                              5
                                                                                                                                                                                                                                                                  <u>-</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>2</u>
                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \stackrel{>}{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
```

This clone is available royalty-free through LLNL; contact the

```
Anote Vector, pi2180 Fav (Pharmacia) with a modified polylinker; 1st strend cDNA was prepared from mammary quand tissue from a lactating tendale, and was then primed with a Not I — Oliqu(dT) primer. Double stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        modified p1713 Vector. Library is normalized. Library was constructed by Bento Soares and M. Falima Ronaldo." 172 c 204 a 251 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       375 alArqThrValMetAsnThrTleGlnGlnLeuMetMetIleLeuAsnSerAluSerAspG 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    804 TIGG-GCCGITTITGAIACIACICCACCATIAGGGGGIITTIAATILCCCCAAGIAICA 745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    95 InProSetCluAsni.cu11eSetTyrPheAsnAsn/ys1hrVa1AsnProLysrluSer1 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    744 GCCCATCCGAAAATCTTGTTCCCTTCCATAFTGTCOCGTTACCTCCAAGAACAATAC 685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                415 leLeuLysArqValLysAspileGlyTyrileFheLysGluLysFheAlaLysAlaValG 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                684 ICCTAGGAGCTTAAAGGIIGICTGCCCACCCTTTAAAAGAGAGGTTTTTAACGTGTGTGC 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                435 lyGlnClyCysValGluileGlySerGlnAraTyrLysLeuGlyValAraLutyrTyrA 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 455 rgValMetGluSerMetLouLysSerGluGluGluArglauSerlleGluAshPheSerl. 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       475 ysteuteuAsnAspAssilePheHisMetserteuteuAladysAlateushuValValM 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       495 etAlaThrTyrSerAraSerThrSerGlnAsnLeuAspSerGlyThrAspLauserPheP 515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 444 TGGCTACGTATAGCAGAGTACATIGCAG AIGIIGALICIGGAACAGALILGIGCTTCC 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              515 rotrp11e1.cuAsnVall.cuAsnLcutysAlaPhcAspPhc1y11ysVall1cotluScrP 545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              884 CGTGGATTCTGAACGTACTTAATTTAAAAGCCTTTGATTTTTACAAAGTGATTGAAAGTT +25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             535 helleLysAlaGluGlyAssEEerTErArqGlaMer HeLysHisLeaglaAraCysGlaH 555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IMAGE Consortium (info*image.llnl.gov) for further information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               356 ThrProArgLysSerAsn--LeuAspGluGluValAsnVallleProProHisThrProV 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      // lone_lib="Soares_mammary_qland_NMLMs" /sex="temale (lactating)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
Mismatches:
                                                               Seq primer: -28ml4 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                   /tissue_type="mammary dland"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                        /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-026-459A-51 (1-928) x AA763485 (1-871)
                                                                                              High quality sequence stop: 495.
Location/Qualitiers
                                                                                                                                                                                                                                                        /clone-"IMAGE:1247665"
                                                                                                                                                                                                                       /db_xref-"taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1014.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        80.44%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         74.48%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21.118
                                                                                                                                                       .871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>a</u>
```

575 205	595 148	615 88	635 28	
555 is Angilia Marighus Arthautha Trpican Aspek Probaghas phanthais 575 111 111 111 111 111 111 111 111 111	575 InSerLysAspArgGluGlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuP 595 HITTITITI HITTITITI HITTITITITITITITITITITITITITITITITITITI	595 roleudinastasinkishtalidalaaspmettyrticuserprovalargserrolyst, 615 	615 ystysolyserThrThrArgValAsbSerThrAlaAsnAlaGluThrGlnAlaThrSerA 635 11:::	6.6 laPheGlnThrGlnLySProLeuLys 643
ŝ <u>.</u>	ć ć	# 2	ò g	5 G

Search completed: January 19, 2003, 05:07:40 Job time: 2667:11 sees

```
Genfore version 5.1.3
Copyright (c) 1993 - 2003 Compugen Ltd.
```

nucleic search, asing sw model M number January 15, 2004, 15:20:22 , Search time 4116.42 Seconds Fun on:

(Without alignments) 18469.506 Million cell updates/sec

.....AAATGAGGATTATTGATAGT 3554 1 edecateArgeregaAAAc. US 09 026 459A·50 4554 Perfect Score: Sequences

dapop 10.0 , dapoxt 1.0 DENITT NOC Scoring table;

16154066 seqs, 8097743376 residues Seat retied: 12308112 total number of hits satisfying chosen parameters;

Maximum DB seq length: Znonooonoo Minimum DB seq length; o

Post processing: Minimum Match 0% Maximum Match 100%

Listing first 45 summaries

Database

em_esthum:* esthar. EST:*

ture: inv... Flu: em dss hum:* 488 mam: * em_qss_mas:• em_estfun:* em_estom:* em_estin:* em_estro:* qb_est4:* em estov:* en estpl:* 4b est 2: * qb, est 4;* qb est5:* qb hter:* qb estl:* .. 2.2.2. x x 883 off, 488 ÷ Ē Ē

Fred. No. 18 the number of results predicted by chance to have a score areafer than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

488 Of her:*

dee, pro-em_qss_rod:*

SUMMARIES

	Describtion	AKO11246 Mus muscu	HM450031 AGENGOURT	BM561083 AGENCOURI	BQ439221 ACINCOURT	POLICORY AGENCOURT	BM475603 AGENCOURT
-		AK011246	1024 14 HM450031	BM561083	HQ439223	84220228	BM475603
Ę	5	Ξ	~	<u>-</u>	~	₹.	<u>-</u>
	Add to the Living in 1915 and 1915	1.44.4	1074	1051	38	H X	1001
* Outer 9	11.	27.2	25.6	9:47	7.7	3	2.4.1
5	٤ 5 5	4.8.4	5.10.2	40.6	856	844.8	786
RevSid 1.	Ž	-	7	~	4	u*	٠,

ALSGALL DREZESTSO ALSGALL DREZESTSO ACCONDUCTOR	EQUALITY COLOR ROLL ACCESSON ALSB 4757 1835/204/56 - 602/591412		BM4.5 4724 AGENCOURT	HES 1927B 60106 1567		BMZ64009 iq 44108.x	BE082846 RC2 B1064	AW58 (181 iallh09.y	AL599633 DKFZp313P	BG25 454 4 - 602 464 27 8	Alf4for88 VW54alo.x	AL539105 DKFZp3136	AA763411 vw54a04.1	AW 5682 54 CM 5 - HT018	AA763485 vw54h01.r	AM1.82967 1408008.y	ALGG-273G DKF2p3131	ALLESS41 DKFEp762D	BE941246 MRO-HT015	BMH02736 AGENCOURT	AV715533 AV715533	BF144857 601790343	A1646097 vw54h07.x	B1151568 602916108	AA258255 Zr59q04.r	B4149050 uu88c01.y	AW502887 UI-HF-HNO		BIB21116 603045591	BM4%C728 AGENCOURT		B1526982 602927177	RE934784 RC3-H1094	
4 BM545881 AL597811 4 BS22227	2 BG610661 A1562757	<		13 BM453724 13 processe						4	~ 4			~	_	4	_		<				~ı	4		9 AA258255				13 B1821116	~ 1	9 AA 959846	3 B1526982	2 86934784
727	2.20				7.67							∞ Ç4 ©	-	_		-			er er er		1154 1			-		525							7 54 1	497
21.2 20.4 20.3		9.6 10.6		4 5- α	2.00		17.4	17.3	17.0	17.0	8	16.4	16.3	16.2	15.9	15.7	ر م. 4	6.5	14.9	14.5	14.5	4.4	4.4	. 4	14.2		14.7		1 \$. 5		13.4	14.4	13.4	э. С
752.4 725.4 729.6	9:55 9:55 9:55	692.2	691.8	8 G 2 G	64 4 . 6	642.2	617	614	605.2	605	596.4	581.6	580	575.2	566.4	558	530.2	5.30	528	516.8	513.8	513.2	512.2	509.2	505.2	493.8	486.4	484.4	481.4	480.2	476.6	475.4	474.4	459.2
r- x 5	01.0		<u>~</u> ;	4 L	16	17	ت 18		50	21	C1 (£ 2		C 25	52	c 27	28	5.7	Ģ.	ر 31 ا	1.5	£.	₽	÷ ;	900	3 /	38	Jr €	د 40	41	્ર*	4.4	44	4

ALIGNMENTS

RESULT 1

SOCO

AK011246 HIC 19 JAN 2002 MKNA Linear HIC 19 JAN 2002 Mus musculus 10 days embryo whole body cDNA, RIKEN LHIL benath enriched library, clone:2600017ML2:retinoblastoma 1, Full insert AKÜT1246 AKÜT1246.1 GE:12847243 sequence. DEFINITION AK011246

ACCESSION KEYWORDS VERSION

HTC: CAP trapper. Mass musculus (Strain:C57HL/6J) lo days embryo chwa to mkwa, chone LibeRikan tuli:length enriched mouse chwa library chone:2603017M22. ORGANISM

Mammalia, Eutheria, Rodentia, Sciuroquathi, Muridae, Murinae, Mus Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Eureleostomi, Mus musculus

Carninci,P. and Hayashizaki,Y. High etticiency full-length cLNA cloning Meth. Enzymol. 304, 19-44 (1999) 99279253 JOURNAL MEDITINE AUTHORS

REFERENCE

TITLE

10349636

PURMED REFERENCE

Carninci, P., Shibata, Y., Hayatsu, N., Suqahara, Y., Shibata, K., Itch, M., Konbo, H., Gazaki, Y., Muramatsu, M., and Hayashizaki, Y., Normalization and subtraction of cap trapper selected chast to prepare full-length cuma libratics for tapid discovery of new genes Genome Res. 10 (10), 1517-1530 (2000) AUTHORS COURNAL 1111E

MEDLINE PUBMED

```
Adachi.J. Alcawa K. Akahira.S. Akimura.T. Avdo.H. Ardi.A. Arakawa Arakawa T. Bonol.H. Brombil. Bonol.H. Brombil.C., Cardidi.F., Tokhuda.S., Fukuda.Si. Futuno.M., Hanagaki.T., Hara.A., Hayatsu.N., Hill.D., Hiramoto.K., Hiraoka,F., Hori.F., Hamo.D. Imochani,K. Ishi.Y. Itoh.M. Fawan M. Kasiawa I. Kato.H., Kwani.J., Kojima.Y., Konno.H., Kodd.M., Koya.S., Kurihara M. Masiyama T. Miyacaki.A. Nishi K. Namira.K. Namira.K. Namira.K. Namira.K. Saito.H., Saito.R. Sakai.K. Saito.H., Saito.R. Sakai.K. Saito.H., Saito.R. Sakai.K. Saito.H., Saito.H., Saito.R. Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito.H., Saito
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Holmann, M., Hume, D.A., Kamiya, M., Lee, N.H., Lyöns, P., Marchioni, L., Mashima, J., Mazzarelli, J., Mombaerts, F., Nordone, F., Rindwald, M., Rodriquez, I., Sakamoto, N., Sasaki, H., Sato, K., Schombach, C., Saya, P., Stoper, V., Stoper, F., Suya, F., Foyoroka, K., Wang, K.H., Weitz, C., Whittaker, C., Wilming, L., Wynshaw, Robis, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S. and Hayashizaki, Y., Suya, F., Suya, F., Suya, F., Suya, J., Suy
                   Sasaki, N., Carningi, P.,
                                                                               Konno, H., Akiyama, J., Nishi, K., Kilsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii Y., Nakamura, S., Hazama, M., Nishine, T., Harda, A., Yamamoto, R., Matsunoto, H., Sakaduchi, S., Ikeqani, T., Kashiwaqi, K., Fujiwako, S., Inouro, K., Tawa, M., Tawa, M., Mara, F., warahiki, M., Yoneda, Y., Ishikawa, T., Orawa, M., Tawa, M., Matsuna, S., Kawai, T., Yoneda, Y., Mutamitsu, M., Inoucy, Y., Kira, A., and Bayashizaki, Y., Pirki, Integrated and analysis (PISA) system—244 format sequencing pipeline with 344 multicapillary sequencer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kawai T. Shinanawa A. Shibata, K. Yoshino, M., Itoh, M., Ishi, Y., Arakawa, T., Hara, A., Eukunish, Y., Konno, H., Adachi, J., Fukuda, S., Alaawa, R. Irawa, M., Nishi, K. Kiyasawa, H., Kandarka, I., Saito, I., Okazaki, Y., Ghisheri, T. Huro, H., Kashawa, T., Saito, P., Kadota, K., Matsuda, H., Ashburner, M., Batalov, S., Casavant, T., Kadota, K., Matsuda, H., Ashburner, M., Batalov, S., Casavant, T., Kidoth, T., Kochiwa, H., Kiphi, E. Lawis, S., Masson, T., Saito, I., Saito, P., Casavant, T., Schriml, T. M., Slaubli, F., Suzuki, P., Tomita, M., Wagner, L., Washio, T., Sakai, K., Okido, T., Furuno, M., Aono, B., Haldarelli, K., Harsh, G., Hake, J., Boffelli, D., Bojunga, N., Carrinnei, P., de Bonalde, M.F., Brownstein, M., Hult, C., Hullia, M., Carrinnei, P., Hullia, M., Carrinnei, S., Hill, E., Hullia, M., Carrinnei, S., Hill, E., Hullia, M., Carrinnei, S., Hill, E., Hullian, Carrinnei, M., Long, D. A., Long, M. M., Marinnei, S., Hill, E., Hullian, M., Carrinnei, S., Hill, E., Hullian, Carrinnei, M., Charinnei, S., Hill, E., Hullian, Carrinnei, M., Charinnei, M., Charin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (10 JUL 2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Fescarch (FIKEN) Laboratory for October Exportation Besearch Group, RIKEN Gemonic Sciences Center (GSC), PIVEN VAKABRA INSTITUTE 22 Submirer-cha. Trainmiku, Yakabma. Kanaqawa 230-0045, Japan (E-mail-genome-resigns riken go.jp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      [148] A. M. A. M. Martin, Apr. J. J. A. Hell (1914) 145 (2018) 1222.
                   S equeben
Itoh M. Aizawa K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission
                   Shibata K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21085550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11217851
                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YELLEKEN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USHING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MELLI NE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOTIKNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
```

uadaiadadaTTCTCGACTTAATTAATTGCCCCCCCCC 31), cDNA was eleaved with Xho! and SstI. Cloning sites, 5' end. Xhois 3' end. SstI.

cDNA library was prepared and sequenced in Mouse Genomie beryshopedia Project of Genome Exploration Research Group in Piken Genomic Sciences Center and Genome Science Laboratory in FIKEN Division of Experimental Animal Research in Fiken contributed to

Please Visit our Web Site (http://genome gso riken go jp/) for

further details,

COMMENT

```
RTCELIYLTQPSSALSTEINSMLVLKISWITPLLARGEVLQMBDDLVISFOLMLCVVD
YFIKESPPALI REPYKTAALPINGSPGTPPBGGNESARIARGLENITELIEVUSKEBE
CHIPPVKNVYFYNFIPFINGL GIVSSNGLPEVESLSKRYEEVYLKNKDLGARLFLDHD
                                                                                                                                                                                                                                                                                                                                                                                 // close_lib-"RIKEN full-length enriched mouse cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /translation="mppkApkRAAAAEPppppppppppAdDSGPEELPLARLEFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ETEEPEFTALOOKTIKVPDHVKEKAMLIMENVSSVOG ILLOOTIQKKRETMGTCFTAAV
OLDOMETETETELOKSTELSVYNEFILLOKETDISTRYDNAMSKLUKKYNVDPALYSKTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KTLQTDP1DSPETERTPRKNNPDEEANVVTPHTPVRTVMNTTQQLAV11 NSASDQPSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              157 GAAACAAAAAACCTGATTTTACTGCATTATGTCASAAATTAAAAGATACCAGATCATGTC 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           457 CHGITGAAGAAGIATGAIGITTGITTGCACIGITCAGGAAATTGGAAAGGACATGIGAA 516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   583 CTATTCAACAACTATAATGTGTTAATGTGTCTCTAAGAAATTAGAACGGACGTGTGAA 642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             517 CITATATATATGACACCAGCAGITCGATALCIACIGAAAIAAALLCIGCALIGGTG 576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97 GAGGACHCANANANANANANACGCCCGGCCCGCCCCCCCCCGCCHCAGCTHGAGTTTCAA 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               277 TAFATTCAAAAGAAAAGGAACTGTGGGGAATCTGTATCTFTFATTGCAGCAGTTGACTA 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   397 ITCITIAACIIACIAAAASAAAIIGAIACCAGIAACAAAGIIGAIAAIGGAAAA 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      37 (4) (A10) (A10) (4) (A10) (4) (A10) (A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                217 AGAGAGAGAGTTFGTTAATTTGGGAAAAGIITGATGTGTGTGGAAIGGAGITGGGAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27.28, Score 968.4; DB 11; Length 1364;
87.98; Pred. No. 2.2e-179;
tive 0; Mismatches 146; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note "data source:MGD, source key:MGI:97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /ordanism-"Mus musculus"
/strain-"c578L/6J"
/db_xref-"FANYOM_D8:2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           346 t
                                                                                                                                                                                                                                                                                                                                                                                                                  /dev_stage "10 days embryo"
1. .1364
                                                                                                                                                                                                                                                           /db_xrof-"MCD-MGT:1906260"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /protein_id="BAB27493.1"
/db_xref="G1:12847244"
/db_xret="MGD:MG1:97874"
                                                                                                                                                                                                                                                                                                     /db_xref-"taxon:10090"
                                     .ocation,/Qualifiers
                                                                                                                                                                                                                                                                                                                                                          7-10se "2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       307 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NI.1 SYFNNCTVNP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             evidence: ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .>1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /qene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 1056; Conservative
                                                                           .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             putative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
Host: SOLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           404 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Juery Match
                                                                                     Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   dene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ė
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \sim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ਰੋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
```

```
EST 05-FFB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BM450031 1024 bp mkNA linear EST 05-FEB-2005
AGENCOURT 6394544 NH_MGC_72 HOMO Sapieus CDNA clone 1MAGE.5528037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryola: Metazoa: Chordata: Craniata: Vertebrata: Buteleostomi:
Mammalia: Eutheria: Primates: Catarrhini: Hominidae: Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1122 PORCARGRANACTOR AND PROPERTY OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE FILE OF THE F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1003 GITTATTICAAAAATTITATCCCITITATAAATTCACTIGGAATTGTATCAACTAAAGGA 1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  997 CTAGATGCAAGATTATTTTGGATGATGATAAAAGTGTTGAGAGTGATTGTATAGAGAGT 1056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1057 ETTGAAAGAGAGAGAGGAGGAGGAAAAAGTAAGCTIGA IGAAGAGGIGAA IGIAAFTGCT 1116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        THE TITGAMACAGAGAGGGCGCGCGCACGAAAAAAACGTGATGAAGAGGCAAAAGGTGGTTACT 1242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1117 CCACACACTCCAGITAGGACTGITATGAACACIATCGAACAATTAATGATTTAAAT 1176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 003 FOTGOAAGIGATGAGGATGAGAAATGTGATTTGCTAGTTCAATAATTGCACAGTGAAT 1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tissue Programment: APPC/DETEX/PPP CDNA Library Preparation: Lite Technologies, Inc. cDNA Library Arrayed by The T.M.A.G.E. Consortium (LIANL) MAN Sequencing by Apartount Bioscience Corporation CDNA Sequencing by Apartount Bioscience Corporation CDNA Sequencing by Apartount Bioscience Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             817 ANAGAATTATTGAAGTTGTGTGTAAAGAAGAIGAATGTAATATAGATGAGGTGAAAAAT 876
577 CTAAAAGITTGTTGGATGACATTTTTATTAGGTAAAGGGGAAGTATTACAAATGGAAGGT 646
                                              823 PPTPTFFPACTACTCAGAGAGCPATACAAAAGAGGTGGAGTCGCCATTAATGGTTCACT 882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               883 FOGACOPOACACOPOECACACOPOCOPOCOPOCACAACAACAACAAATGAT 942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          877 GITTATLICAAAAATILIALACCEEFFFATGAAFTGTCTTGGGGEFGTAAGGTGGTAATGGA 936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NIH-MGC bitps//mac net nets qea/ \rm NIH-MGC bitps//mac of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                        6.47 GATGTGGTGATITCATITCAGTTAATGGTATGTGTGTCGTTGACTATTTATTAAACTGTCA 696
                                                                                                                                                                                                                                                        763 GACCTGGTAATCTCATTTCAGCTAATGTTGTGTGGTGACTATTTTATTAAGTTCTCA 822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9-17 CTTCCAGAGGTTGAAAATCTTTCTAAACGATACGAAGAAATTTATCTTAAAAATAAAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: eqaphs:r/mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BM450031.1 GT:18499071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 1024)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5', mRNA sequence.
BM450031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Botto sapieus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    houman.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1363 00 1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1247 170 1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROTANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A STHEAKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                THEN AL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PUSSILL 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IM45004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MMENI
    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                             40
                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                           =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
```

```
/tissue_type="molanotic molanoma"
//tab_host-"DH10B (phage resistant)"
//note-"ordan: skin; Vector: pCMV SPORT6; Site_I; NotI;
Site_2: SalI; Cloned unidirectionally. Primer: oliqo dT.
Average insert size 2 kb. hibbary constructed by Lite
Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2:21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2862 TANCITTCCCAGGICIGILIAIGGCCACATHAAIATCTICAGTCTITTTGGGAATAT 2921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2622 GAAAAAACTACGCTTTGATATTGAAGGATCAGATGAAGCAGATGGAAGTAAACTATCTCCC 2681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2682 AGGACACTCCAAATTTCACTACAAACTGCCAGAAATGACTTCTACTCGAA TACGAATGCA 2741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2742 AAAGCAGAAAATGALGALAGTALTGATACTICAAACTAAAGAAGAAAALGAGTTLILA 2801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2802 GGACCTIGGIGGACACIGIGIACACCICIGGATICATIGICICICICACACAGACGIA 2861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 TCATGCTGTTCAGGAGACATTCAAACGTGTTTTGATCAAAGAAGAGGAGTATGATTCTAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361 AGTATCAATTGGTGAATCATTCGGGACTTCTGAGAAGTTCCAGAAAAIAAATCAGATGGT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541 AGGAGAGTGGAAATTTGAGGAGAAAC1GGCAGAAATGAC11CTAC1CGAACACGAATACA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25.6%; Score 910.2; DB 14; Length 1024;
95.2%; Pred. No. 5.5e-16#;
tive 0; Mismatches 44; Indels 6; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 CAAAGTGAAGAATATAGACCITAAATTCAAAATCATTGTAACAGCATACAAGGATCTTCC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2382 TCCTAGTTCACCTTANGGATFCTGGAGGGAAATCTATAFTTAANNYTGAAGGCCTTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTHILLIAHTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301 ATATAAAATTITCAGAAGGTCTGCGAACACAAAAAATGAGTCCAAGATGAAGAATCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2202 TCATCCTCTTCACCACACATTCAAACCTCTTTTCATCAAAGAAGAGTATTATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              found through the L.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM12204 row: d column: 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Z81 t
                                                                                                                                                                                                                                    /ordanism="Homo sapiens"
/db_xrel="taxon:9606"
/clone="IMAGE:5528037"
                                                                                                                    High quality sequence stop: 643.
                                                                                                                                                                                                                                                                                                                                                                    /clone_lib="NIH_MGC 72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          197 4
                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 972; Conservative
                                                                                                                                                                                                       1. .1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          334 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                           SOULTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                 PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    i
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QQ
```

```
Zhote" Organ, eye, Vector. pCMV-SPORT6, Site 1: Noft:
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1 75 kb Library constructed by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PMS61083
ACRNOURL_6566133 NIH_MGC_67 Home sapiens clara clocke IMAGE:5559905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo Sapiens
Enkaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalla, Eutherja, Primates, Catarrhini, Hominidae, Homo.
                                        ZAZZ AAAALGIGSAGALGGAATIGITTI - GGIGATIGCTAAGGGGACTIGAAATGITAGITT 2979
                                                                                                                                                                                                                                        8048 PEGETTE COLOCITACCAAACTAAAATTGCTGTGTTTATGGATAGTAAGAATGG---CCCT 3095
                                                                                                                                                                                                                                                                                                                                                           94.] AAGGGGAGGTCTGAATACCCAAGGCCTGCTGTTTTGCCCTTCTTTTGCTAAAA 1020
                                                                                                                                          ZENE ETTATTTATACAAGATTGAAAATCTTGTGTAAATCCTGCCATTTAAAAAGTTGTAGCAGA 3039
                                                                                                                                                                                                                                                                                                                                         1996. AGAGIGGGAGIGCTGATAACCCAGGCCTGTGAATTAGTTTGGGTGTTTTGGGAGCATAT 3155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :400 AAAAATGIGGGAAAAGGTTGIGIGTGAAATTGGATGGGATAGGATAGAAAGTIGGAGTTGGA 1389
                                                                                                                                                                      7.21 IAACITTOCCAGGTICIGITIAIGGCCAGATTAAIACCFCAGGCICTFTFGFGGAAIAF 286
                                                                                            741 AAAAIGISCAGAIGCAAITGIPPPGGGPGAFPCCTAAGCCACPFGAAAFGGFAGTCAFF 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        UNA Sequencing by Agricount Ringeligner Caperation Can be Clone distribution: MGC clone distribution information can be found through the 1 M A G E Consertium/LINI at-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 1051)
MIHTEMAC ELLECTION AND WIND ATTENTANT BUTTON OF COLLECTION (MGC)
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sign Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDNA Library Preparation. Lile Technologies, Inc. CONA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 13; Length 1051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_lib-"NIH_MGC_67"
/rissur ryp.-"refineblastema"
/lab_bost-"pHi08 (phage-tesistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             - ·
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25.6%; Score 909.4; DB 13; 98.4%; Pred. No. 7.8e-168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Average insert size 1 75 kb
Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        299 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plate: LLAM12263 row: m column: 18
High quality sequence stop: 737.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           O: Mismatobes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Sanigas "Homo sapions"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zelene-"IMAGE SESSOSS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xre1-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Omalifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     197 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BM561083.1 GI:18806043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        221 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5', mRNA sequence.
BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Grery Match
Best Local Similarity
Matches 948: Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Triman.
                                                                                                                                                                                                                                                                                                                                                                                                                                     4154 A 3156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1:21 A 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ESH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N. I. I. N. I. H. H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    - KCAN : SM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
ATTR PS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
SOURTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J. SUKNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
2
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              71,5
                                                                                                                                                                                                                                                                                                                                                                                     Ĩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                            1
                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                         3
```

```
8Q439221 128 24 MAY 2002
AGENCOURT_7766562 NIH_MGC_92 Homo Sapiens cuna clone (MAGE:6015480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Esteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
1366 ITSTAITASSSA1AAISSAALOSATSOTIAAATSASAAGAAGAAGATTIOA 1419
                                                                                                                                                                                                                                                                                                                                                                                                          1600 ATGGAAAGTTTTATGAAGGAGAGGGAACTTGACAAGAAATGATAAAAACATTTAGAA 1659
                                                                                                   480 GACCITICITAATGGCGACATATGGAGAAGTACATCTCAGAATCTTGATTCTGGGAACAGAI 1539
                                                                                                                                                                                                                                                                                                         1840 INSTITUTURALGGALIGIGAAIGIGCITAAITIAAAAGCCITIGAITITIAAAAGIG 1889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1780 CTTAATCTTCCTCTCCAGAATAATCACAGCAGGAGATATGTATCT111CTCCTG1AAGA 1839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u> 1840 TCTCCAAAGAAAAAGGTTFAACTAGGGGIGTAAATTCTACTGCAAA1GCAGAGACAA 1899</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Podice TANCOTONES TESCO NOS NASARAS SENTI CANTOTA STANDA SENTATORIA 1956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2020 GARGARGRANAATTARAARATATRATRATRISSARGRETTTTERASSACARRISCACAALGAS 2079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2080 TATGAATCATGAGAGAGAATTTSGAGGAAATTATGATGTGTGTGCATGTATGGGATA 2139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2140 INCCARACTICARCANTATINCANCITTAA-AITICAAAATICATINCTAACCACCATACAACGALICT 2198
                                                                                                                                                                                                                              61 TECTATTACCOAGTAATGGAATGCATGCTTAAATGAGAAGAAGAACGATTATCCATTGAA 120
                                                                                                                                                121 AATTITAGCAAACTICIGAAIGACAACAITITICAIAFSICITIATIGGGGGGGGGCTCTI 180
                                                                                                                                                                                                                                                                                                                                 481 CTIAAICHFOCHCEGASAAIAAFCACASCASCASAIAIGIATOFFCTCTGTAASA 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781 TAVGAACTCAVGAGAGAGAGCANTTFGGAGGAAATATGATGTGATGTGTFGTAFGAFGTALGGGAJA 940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        841 IGCAAAGIGAAAGAIAIAGACCIIAANAIICAAAAICCIIGIAAAGAGGAIACCAGGAIGI 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                          301 ATCGAAAGTTTTATCAAAGCAGAAGGAACTTGACAAGAAAAGAAATGATAAAAACATTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1660 CGATGTGAAATCGAATCATGAATGCCTTGCATGGCTCTGAGATTGACTTTATTTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1720 CTTATTAAACAATCAAAGGACCGAAAAGACCAAACTGACGTGAATGTGACTTGTGCT
                                                                                                                              2199 POTTO AND PARAGASASASA HAMAAAGIGB-TUTGA MAAAAAAAGAG 2250 HIB HIB HIHIHIHIHIHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        901 TOTTOALGOTONICAGGAGACALIOAAAOGTGTTTTGATGGAAGAAGAGGG 953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PQ439221.1 GI:21178297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BO43922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HQ439221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSTAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOUPCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90
                                                                                                                                                                                                                                                      ç
                                                                                                                                                                                                                                                                                                                                                                                                          ζŽ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ô
```

us-09-026-459a-50.rst

S

```
Anoto-Turdan: testis: Vector: pcMV-spoRT6; Site_1+ NotI; Site_2: Salt; Clend unidertectionally, oligo-dr primed. Average insert size 2.5 kb. library ouriched for full-length clones and equstranted by like Technologies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26% GANGCAGATGGAAGTAAACATCTCCCAGGAGAGTCCAAAATTTCAGGAGAAACTGGCAGAA 2715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41 (6. TONOTICTITEGENAMIAIAINGEGATGITEGETEGETETATTATTATATGIATA 3195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2776 AACAAGGAAGAAAATGAAGGATCTCAGGACCTTGGTGGACACTGTGTACACCTCTGGATT 2835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2836 CATESTOTOTOACAGATGTGACTGTATAACTTTCCCAGGTCTGTTATGGCCACATITA 2895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2956 AAGESATTGAAATGITAGICAITGIIAIIIAIACAAAGAIGGAAAATCFGGGAAATCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (0.16) FGCCATTAAAAAGTTGTAGCAGTTGTTGCTTCTTCCAAAGTAAAATTGCTGTGCTTTA 3075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1975 HIMALAGIAAMAA HOOFOTTADAGHOOGAGHOOTAA AAGCCAGGPERTOAQHAGHE 3135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4196 IFTTTTAATTTAACAGGGCTTAGAAAATGTGTGCTATCTACAAATGCAA 3255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2716 ATGACLLOTACHOGAACACAAAGAAGAAAAAAAAAAAAAGATGAATGATGGTGGTGA 2775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2896 AFAFCTEAGGFGITTEGEGGALATAAAATGTGCAGAFGCAATFGFFGGFGAFFGGGFGAFFGGF 2955
                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA Sequencing by: Agenceurt Bioscience Corporation
Clone distribution: MCP clone distribution information can be
found through the L.M.A.G.E. Consortium/LLML at:
Plate: LLAMIS211 row: k column: 01
1 (bases 1 to 1081) NIH-MGC http://mgc nci nih qoz/. Natronal Institutes of Health, Mammallan Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181 CATTGTCTCTCACACATGTCACTGTATAACTTTCCCCAGGTTCTGTTTATGGCCACATTTA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      141 THE CONTROL OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481 100711C1111G1AGCAIAFAGGIGAFGT11GC1C1TGTTTTTATTATATATGTATA 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5; Indets 3; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GAAGCAGATGGAAGTAAACATCTCCCAGGAGAGTCCAAATTTCAGCAGAAACTGGCAGAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cona Library Preparation: Life Technologies, Inc. cona Library Arrayed by: the L.M.A.G.E. Consertium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone lib="NiH MGC_92"
/tissue.type="embryonal carcinoma, cell line"
/lab_bost="bHloB (phage resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24.1%; Score 856; DB-14; Length 1081; 99.1%; Prod. No. 2.20-157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Note: this is a NIH_MGC Library."
190 c 183 g 371 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                Contact: Kobert Strausberg, Ph.D.
Email: eqapbs-r'email.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /ordanism "Homo sapiens"
/db xret "taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop: 732.
Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zelone "IMAGE: 6015480"
                                                                                                                                                           Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 892; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          [H]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            James y Matich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HASSE COUNT
     REFERENCE
                                                         AUTHORS
                                                                                                                                                           FILKNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FLATURES.
                                                                                                             37
                                                                                                                                                                                                          N. WW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NI:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ē
```

```
FQ220275
AGENOOURT_7572621 NIH_MOC_92 Banks sapiens consections (MANIL 6044552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /hote-"organ: testis: Vector: pUNV SPORT6: Site_1: Not1)
Site_2: Sall; Cloned unidirectionally; olino dT primed.
Average insert size 2.5 kb. Library enriched for
tull-length clones and constructed by Lite Technologies.
Note: this is a NIH_MOC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
Eukaryota, Metazoa, Chordata; Craniata; Verfebrata; Enfeleostomn;
Mammalia; Eutheria; Primates; Cataribin; Hominidae; Homo,
                                         4475
                                                                                                                                                                                                                     3376 GATATACTGFGFGFGFTFFFTATAAAATFFFGCTTTTAAFFTAAAFAAAAAAATTGAAA
                                                                                                                                                                                                                                                                                                             14.95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution intermation can be
found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                       779 AGLATAACCATATGATACTACTACTGAAACAGALTICATACTCAGAATGTAAAA B38
                                                                                                                                                                                                                                                                                                                                                                                           National Institutes of Health, Mammalian Gene Follection (MGT) Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    * 626 AAATGGAAGAYGATGTGGTGATTTGAGTTAATGGTAFGYGYGYTGTTGATALTTA 685
541 TITITITAATTIAACAIGAACACCCTIAGAAAAIGIGICCIAICIAICTICCAAATOCAA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        34.36 AGTATAACCATATGATACTACTACTGAAACAGATTTCATACCTCAGAAA.
                                                                                                                                CDNA Library Preparation: Lite Technologies, Inc. CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24.8%; Score 844.8; DB 14; Length 881;
99.0%; Pred, No. 4.5e-155;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone-"IMAGE:6044522"
/clone-lib-"NIH_MiG-92"
/tissuc_type-"embryonal carcinoma, cell line"
/fab_most-"HHIOH (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. 4.5e-155;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plate: LLAM13287 row: e column: 04
High quality sequence stop: 690.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Robert Strausberg, Ph.D. Email: eqapbs-r-mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 881)
NIH-MGC http://mac.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Oualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BQ220275.1 GI:20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , mknA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 871; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OK C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
a
                                                Ś
                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                             ò
```

```
BM475504 $1001~{\rm kp}$ mRNA linear EST 05-FEB-2002 A:EW:UFF_6480007 NIH_MY7_92 Home sapiens chuA clone IMAGE:5575683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1406 GATTATGCATTCAAAATTTTAGCAAACTTCTGAATGACAACA-TTTTTCATATGT-CTTT-1463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.46 CIAIAGACAGIIIIGAAACACACACACAACAACAAAAAAAGTAACCIIGATGAAGAGGIGA 1105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                106 AIGIAATFOOFOGACACTOCAGTTAGGAOTGTTATGAAOACTATOCAACAATTAAFGA 1169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1166 IGATHITAAATTCAGGAAGTGATCAAGGTFGAGAAAATGTGATTTGGTATTTTAAGAAGT 1225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1226 OCACAGTSAATSTAAAASAAAATATATISAAAASASESTAAAASAATATAA 1288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      446. AA/TIGGAGITGGCITGTALTACCGAGIAATGGAATGCATGCTTAAATCAGAAGAAG 1405
                                                                                                                                                                                                                                                                                                                                                                                                                                                  HE AAAALAAAGAFCFAGAGGAATTAFFFFFGGAFGAFGAFAAAAGTGFFGGGGFGAFF 1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.1 FLAAAGGGGGGGGGGGGTGTTGGTCAAAGAACGATATAAAACAGCTGTTATACGGATTA 120
                                                                                                              HUR TAGAAAATGA FACAAGAATTATTTGAAGTTTTTGTGTAAAGAACATGAATGTAATATAGATG 865
                                                                                                                                                                                                                       281 TAGAAAATGAFACAAGAATTAFTGAAGTTCFCFGFAAAGGACAFGAATGTAATAFAGAFG 240
                                                                                                                                                                                                                                                                      866 AGGTGAAAAATGTTTATTTCAAAAATTTTATACGTT1TAYGAA11C1C1TGGACTTGTAA 925
                                                                                                                                                                                                                                                                                         28 CATCTAATGGACTTCCAGAGGTTGAAAATGTTTCTAAACGAIAGGAAGAAAIFIAICTIA 985
                                                                                                                                                                                                                                                                                                                                                                                                        441 OATGIAAIGAACTICCAGAAGITEGAAAATCTITTCTAAAACGATACGAAGAATTTATGITA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361 AAAATAAAGATCTAGATGCAAGATTATTTTTGGATGATGATAAAAACTCTTCAACTGATT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481 ATGTAATTOOTOCACACACTOCAGITAGGAPTGTTATGAACACTATOOACAACAATAATGA 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541 IGATITIAAATICAAGAAGIGAIGAACOIRCAGAAAAIGIGATITGGIATITIAAGAAGT 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                686 TIAAACTCTGACGICCCAIGIIGCICAAAGAACCAIATAAAACAGGIGIIAIAFACCCAITA 745
                                                                                         NIE MAC bitp./pmg.nci.nih.uov/.
National Institutes of Health, Mammallan Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1464 ATTGGGGGGGCTCTTGAGGTTGTAATGGCCACATATAGC 1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1001 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BM475603.1 GI:18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5 , MKNA
HM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AHIH ES
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 6
BM475+03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYW RDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                             2,
                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       يت
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ē
                                                                                                                                                                                5
                                                                                                                                                                                                                       ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
```

```
//soce-"Organ. testis, Vector. pCMV spoki6. Site_1: Noti; Site_2: Sall; Cloned unidirectionally; oliqo-dI primed. Average insert. size 2.5 kb. Library enriched for lull-length clones and constructed by Life Technologies. Note: this is a NHLMGC Library."
                                                                                                                                                                                                                            cDNA Library Preparation, Life Technologies, Inc.
LDNA Library Arrayed by: The T m A G F Consortism (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the LM.A.G.E. Consortium/LLNL at:
http://mgc.llnl.go.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            953 ATCTTTCTAAACGATACGAAGAATTFALCTTAAAATAAAGATCTAGATGCAAGATTAT 1012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                414 AGAAAIIGALACCAGTACCAAAGTIGAIAAIGCTAIGIGAAGAGTGTTGAAGAGTATGA 473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     43 AGTAATTGATAGCAGTAGCAAAGTTGATAGCTAIGICAAGACIGITGAAGAGIATGA 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                548 AMPERANTERANTERATATETALISAAAIAAATICTGGATGGTGATAAAAGTTTGTTGGA 592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  163 AM TOTAM PASTEDSAIAFULACISAANIAAAITCICCATIGGIGGIAAAAGITITCIISGA 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               403 GTCAGAACAGGAGTGCACGGATGCAAAACAACTAGAAAATGATACAAGAATTATTGAAG 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           463 TÜÖTÇTGTAAAGAAGATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATT 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  893 TIATACCITITAIGAAIICICIIGGAACIIGIAACAICIAATGGACIICCAGAGGIIGAAA 952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             58 A ATCHITCHAAACGAIACGAAGAAATTTATCTTAAAAATAAAAACAFCKAGALGCAAGAHINI 642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   593 TCACATTTTTATTAGCTAAAGGGGAAGTATTACAAATGGAAGATGATCIGGIGALLICAL E52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   653 TICAGITAAIGCIAIGIGCIIGACIIGAIAITIIAIIAAACICICACCICCCAIGLIGGIGA 712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      713 AAGAACCATATAAAACAGCTGTTATACCCATTAATGGTTCACCTCGAACACACCAGGCGAG 772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                773 CTCAGAAGAGGAGTGGAGGATAGGAAAAGAAGIAGAAATGAIACAAGAATIAIICAAG 832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         833 TICICICIANAGAACAIGAAIGIAAIAIAIAGAIGAGCICAAAAAAIGIITAITICAAAAAII 892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                474 IGIAIIGIIIGGACICIICAGCAAAII-GGAAAGGACAIGIGAACTIAIAIAITIGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HITTELLITELLE HITTELLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     223 TCACATTTTATTACCTAAAGGGAAGTATTACAAATGGAAGATGATCTCCCTCATTTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="NIH_MGC_92"
/tissue_type="embryonal carcinoma, cell line"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22.1%; Score 786; DB 13; Length 1201; 95.1%; Pred. No. 1.1e-143; Live 0; Mismatches 40; Indels 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /lab_host~"DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "crqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence start: 17
High quality sequence stop: 734.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone-"IMAGE:5575683"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref-"taxon:9606"
                                                  Contact: Robert Strausberg, P
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
      Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 833; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HASE COUNT
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
```

```
Zhote Torquin ovary (pool of 3); Vector: pCMV-SPORT6:
Site 1: Beak (destroyed), Site_2: Neif: BNA source pool
of three ovaries, from temades ranging in age from 38 to
49 yo. Library is oliqo di primed and directionally cloned
(Booky site is destroyed upon cloning). Average insert
size 2.1 kb, insert size range 1-3.5 kb. Library is
commalized and enriched for full length clones and was
constructed by G. Graber (Invitrogen). Research Gegetics
tracking rode 036.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       НИ54588)
Адемулят (6505) в 3 NIH_MGC_125 Homo sapiens charactone IMAGE:5588245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
TOTAL TELEGRALICATION TO TRANSPORT TO THE ANTIGORAGIST TO TRANSPORT TO TOWN TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TOT
                                                                                                                                                                                                                                                                                    1023 CACCACGAAAAATTAACTTGATGAAGAGGTGAATGTAATTGCTGCACACTCCAGTTA 1132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1134 GGACTGTTATGAACACTATCCAACAATTAATGATTTTAAATTCAGCAAGTGATGAAC 1192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1194 CHICAGAAALCIGAFII -CGIATITJAAGAAGTGGAGAGFGAATCVAAAAGAAAGTAT 1250
                                                                                                                              64 - LITEGGATCATGATAAANTCITCAGAGTGATTGTATAGACAGTTTTGAAAGAGAGAA 702
                                                                                                                                                                                                                                                                                                                                               THEFFER HITTER HITTER FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   chNA Library Preparation: Lite Technologies, Inc. clnA Library Arrayed by: The L.M.A.G.E. Consortium (LLNE) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              76.4. GGACTGITATGAACACTAFCCAACAATTAATGATTTTAAATTCAGCAAGTGATCAAC - 822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           824 OT FOAAAAAAFOOGALLEFFOLATTITTAACAACTGCACGTGGAATOOCAAAAGAAAGC 882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6, Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mammalia: Butheria: Primates; Catarrhini: Hominidae; Homo.
1 (bases 1 to 1122)
                                                                          wherey Match 21.2%; Score 25.2.4; 58-13; Length 1122; Rest Local Similarity 25.6%; Pred. No. 4.2e-137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      32,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1251 ACTGAAAAGAGTGAAGGATATAGGATACATCTTTAA 1286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HB3 TATACCCCAAAACAACCCTAACCAATATACCAATAA 918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               359 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Plate: LLAM12459 row: a column: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       o, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /ordanism="Nomo sapiens"
/db_xret "taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zelone_lib "NIH_MGC_125"
/lab_bost="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        High quality sequence start: 48
High quality sequence stop: 773.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zelone: "IMAGE: $588.245"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NIH MGC http://mgc.nci.nih.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: eqapbs r mail.nih.gov
Tissue Procurement, Invitrogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               216 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BM545881.1 GI:18778365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        185 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Orpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , mkNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Compercial (ve.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BM545881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Materials 827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Owery Materia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 October 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NOT IN LATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MASSE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PESULT / BM:45881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PEFFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHARS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FULKNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEALURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LUNGWENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NICH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S. HR.E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LIN IIN
                                                                                                                              1
                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                   £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
```

2521 FICGGGATEPTGAGAGTECAGAAATAAATGAGATGGTATGTAACAGGGACGTGTG 2580

```
EST 14 - AUG - 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryoja, Metazoa, Chordata, Craniata, Verfebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1217
                                                                                                                                                                                                                                                                                                                                                                                                 2881 ITATGGCACATTIAAIALCTICAGCTCTITITIGIGGATATAAAATGLGCAGAFGTAATT 2940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2701 CAGAAACTGGCAGAALGACTTCTACTFGAACGGAALGAAAAGGAAAAAAAAATGAAT 2746
                                                                                                                                                                                                                                                                2870
                                                                                                                                                                                                                                                                                                                                   SHHC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3061 AATTGCTGTGCTFTALGGALAGTAAGAALGGCCCTAGAGTGGGAGTCTGALAACCAGG 3120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3238 TCTATCTTCCAAAIGCAATTTGATTGACTGCCCATTCACCAAAATTATCTTGAACTCTTC 3297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCAAAAAT-GGATATTATTAGAAATTAGAAAAAATTACTAATTTTACATTAGATTT +456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          719
                                                                                                                                                                                                                                                                            360 ATTGANGGATCAGATGAAGGAGTAAAGAATTCCCAGGAGAGTCCAAATTTCAG 419
                                                                                                                                                                                                             565
                                                                                                                                                                                                                                                                                                                                                                                                                   780 AATTGCTGTGCTTTATGGATAGTAAGAA FGGGCCTAGAGTGGGAGTGCTGATAAGTGAGT 839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            899 TAATITATAATGGATATTITITTTAATTTAACATGAANCACCCTTAGAAAATGTGTGCTA 958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DKFZpV1 (0816_11 (1) (sytoopm. hlev.) Home sapiens cDNA clone
DKFZpV1 (0816 57, mKNA sequence.
                                                  2581 CTCAAAAGAAGTGCTGAAGGAAGCAACCTCATAAACCACTGAAAAACTACCCTTGAA
                                                                                                                      2641 ATTGAAGGATGAGATGAAGCAGAGGGAATTAAACATTTOCAGGAGAGTTCAAATTTOCAG
                                                                                                                                                                                                                                                            2761 AGCATGGATACCTCAAACAAGGAAGAAAATGAGGATCTCAGGACTTGGGGACATGT
                                                                                                                                                                                                                                                                                                                               2821 GTACACCICTGGATTCALTGTCTCACAGATGTGACTGTATAACTTTCCCAGGTTCTGT
                                                                                                                                                                                                                                                                                                                                                                540 GTACACCTCTGGATTCATTGTCTCTCACAGATGTGACLGIAIAACTTTCCCAGGTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2941 GTTTGGGTGATTCCTAAGCCACTTGAAATGTTAGTCATTGTTATTATAAAAATTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8121 CCTGTCTGACTACTI ISCOLICITI I GIAGCATA I ACOTGTTT ACTTTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3181 TAATTTATA --TGTATATTTTTTAATTTTAACATGAA -CACCOTTAGAAATGTGTCOTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300 CTCAAAAGAAGTGGIGAAGGAAGCACTCCIAAACCACTGAAAAAACTACGTIIGAI
                                                                                                                                                                                                                                                                                                                                                 Libear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7.27 hp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3357 LATTITACLATTIGGAALCTGALATA 3381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1078 INTERPRETATION | 1 | 141 | 1028 IATHINATION | 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ALS97811.1 GI:15150502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ολ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                     2
                                                                                                                       Ś
                                                                                                                                                    9
                                                                                                                                                                                           ò
                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                 Ċλ
                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                 a
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ō
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ô
```

```
Matches 737;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ouery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                               ИСБЕБЕВЯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Actions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                    .
વે
                                                                 ā
                                                                                                                                                                                                                                                          Q
[]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
Poustka,A., Wellenreuther,R., McWes,H.W., Well,B. and Wiemann,S.).
ESI (Poustka,A., Wellenreuther,B., McWes,B.W., Well,B. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            puriplex2, Site_1 SfilA, Site_2 SfilB;
                                                                                                                                                                                                                                                                                                                                                Heidelberg/A-roany) within the ofNA sequencing consection of the
German Genome Project.
                                                                                                                                                                                                                                                                         Close from S. Wiemann, Molecular Genome Analysis, German Cancer Research Center (DEPY): Pmail s.wiemann4dkfr heidelberg.de; sequenced by DKFZ (German Cancer Research Center,
                                                                                                                                                                                                                                                                                                                                                                                                                                               Historiang 6, 14059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2412 GANCAFCTATATTTCACCCCTGAAGAGTCCATATAAAATTTCAGAAGGTCTGGCAACACC 2471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1992. AAATAGAAGU GUGAAGUGOTU GAGAAGAGAAGAATTAGAAAAATAAGAGAAGA GAGA GAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        z 32 chtiticanggachachchagaataaatataachchaaagaagachagaach 2111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.3.5.2. ACCHTACAT FOOT GGAAGCCCHTACAAGT TECTAGT TEACGCT TAGGGAT TOCTGGAGG 24.1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      [++3] SAAAICIAPCTCTTTCACIGITTTAIAAAAAAGTGTAFFGGGPTAGGPTATFTPCGGGGT 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2112 AATIAIGAIGTGTGTGTAGAATATGGGATATGGAAAGTGAAGATATATATAGAGTTAAATTGAA 2171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2172 AALGALIGIAACAGCATACAAGGAFGTTCGTGATGCFGGTGGGGGGGGTFGAAAGGFGF 2233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22/2 ITTGATCAAAGAAGAGGAGTATGATTGTATTATAGTATTGTATAACTCGGTCTTCATGCA 2291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361 GARANTRAAAANAAATATTTIANARTAFRITFROAD/AGBOOCCTACCTTGTCACCAAT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421 ACCTCACATCCTCGAAGCCCTTACAAGTTTCCTAGTTCACCCTTACGGATTCCTGGAGG 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 AAAIACACIIIGIGAAAGGOOTTOTGTGTGAGGAGOOGAGAAFIIAGAAGAIAIOAAGAAFOTGGAAO 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 AAICAIIGIAACAGCATAOAAGAICIICCICAIGHTTTAGGAAACAITTAAACHTT + ADD
                                                                                                                                                                                                                                                                                                                                                                                         No.st sequence available.
This clone (ORE2p31300816) is available at the RZPD in Berlin.
Please contact the PTPL Bosourescent; J. B.sborneg f. 1405
Berlin-Charlettenborg, GPPMANY: Email: closedrypd de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GAAATCIAGCICTTTCACTGITTTATAAAAAAGIGIATCGGGCIAGCCIAICICCGGCI 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20.4%; Score 725.4; DP 9; Length 727;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                          Fax. 44.780-84131128
Email: poustka*mpimg-berlin-dahlem.mpq.de
this is the 5' sequence of the clone insert
                                                                                                                                        Max-Planck-Institute for Molecular Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /cione="DAFZp31300816"
/cione=lib="313 (synonym: hice2)"
/de_stage="adult"
/lab_host="PHIOP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred, No. 8,4e 132;
                                                                                                                                                              lbnestrasse 73, 14195 Herlin, Germany
rel: -49-30-84131623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      198 ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /ordanism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db xrof-"tayon-9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   130 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  coNA-collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Auguana again,
                                                                                          Contact: Poustka A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #5 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        161 G
                                                                    Unpublished (1999)
                                                                                                             Department Lehrach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 726; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bost Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9031108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HASE TAKE
  ALLERIES
                                                                 JAMENAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                   37...
                                                                                          MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \hat{\tilde{z}}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \hat{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ξ
```

```
BQ202227
AGENYOVET_7566045 NIH_MSG_92 Homo capiens cenh clone image:6041563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
Eukaryota: Metacca: Chordata: Craniata: Vertebrata: Fitt-leustomi:
Mammalia; Eutheria; Primates: Catarrhini; Hominidae: Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note-"Organ: testis; Vector: pCMV-SPOR15; Site_1: Not1; Site_2: Sill, Cloned unidirectionally; oligo-dl primed. Average insert size 2.5 Kb. Library enriched for full-length clones and constructed by Lite Technologies. Note: this is a NIH_MGC_library."
2472 AACAAAAATGACTCCAAGATCAAGAATCITAGIALCAATTGGTGAATCALTCGGGACTTC 2531
                                                                                                              2532 TGAGAAGTTCCAGAAAATAAATCAGATGGTATGTAACAGGGACGGTGTGCTGAAAAGAAG 2591
                                                                                                                                                                                                                             2592 IGCTGAAGGAAGCAACCTOSTAAAOVACTGAAAAACTACGCTTIGAIAITGAAGGAIG 2681
                                cDNA Library Preparation: Life Technologies, Inc. (CDNA Library Arrayed by: The I.M.A.G.E. Consortion. (LIRI) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MCC clone distribution: MCC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  National Institutes of Health, Manmalian Gene Collection (MGC) Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         475 GIATTECTTTTCACTTTTCAGCAAATTGGAAAGGACATGTGAACTTTATATATTTTGACACAA 534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     535 CCCAGCAGFTCGATAFCIACFGAATAAAITCIGCAFTGGTGCIAAAAGTTTCTTGGATC 594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20.3%; Score 720.6; DB 14; Length 880; 98.7%; Pred. No. 7.2e-131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib "NIE_MXC_92"
/Lissue_Lype="embryonal carcinoma, cell line"
/lab_host="DH10B (phage-resistant," cocosts. 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  %ttp://image.llilige?
Plate: LLAM13279 row: i column: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact, Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone="IMAGE:6041563"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          High quality sequence stop: 606.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 880)
NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref "taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: eqapbs rêmail.nib.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5', mRNA sequence.
BQ22227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
                                                                                                                                                                                                                                                                                                                                         2652 ACAICAA 2658
                                                                                                                                                                                                                                                                                                                                                                                          721 ASATSAN 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         numan.
```

ŝ

â

5 â

Ξ

÷

Ξ

=

```
#02611848E1 NIH_MGC_60 Homo sapiens cone inAGE:4737634 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1135 ACTECTATIONACACTATIONACONTRATIONAL TITTANANTICAGEAGEGAGEGALCE 1193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                955 PT FELLAAACGATACGAAGAATETATCTTAAAAATAAAGATCTAGATGGAAGATTATTT 1014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1015 TEGGATCATGATAAAACTCTTCAGACTGTGTATAGAGGTGTGGAAACACAGAGAAAAA 1074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HELLELLE HELLE HEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481 CTITCTAAACGATAGGAAGAAATTTATG1TAAAAATAAAGATGTAGATGCAAGATTATTT 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA Sequencing by: Incyte Genomics, Inc.
595 AMALLIHALIAGTIAAAGDMAAGIALIAGAAHGGAAGALGALGIGGIGGALFICAFFF 654
                                                                               HITTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELlettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 GAACCATATAAAACAGCTGTTATACGCATTAATGGTTCACCTCGAACACCCAGGCGAGGT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       775 PAGAAGAGGGGGGGGGAJAGPAAAAGAAGTAGAAAJGATAGAAGAAJTATTGAAGTT 834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               895 ATACCITITATGAATICICITIGGAACITGIAACATCIAATGGACHTCCAGAGGIIGAAAAI 954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 824)
NIH MGC http://www.n.i.c.b.gov/
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                               655 CANTIAATOCIAEGIGICOTIGACIATITIAITAAAACICICAGGIGGGAIGITGGIGAAA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       715 GAACCATATAAAACAGCTGTTATAGGCATTAATGGTTCAGCTCGAACACCCAGGCGAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    chNA Library Preparation: CLONETECH Laboratories, Inc. chNA Library Arrayed by: The L.M.A.G.E. Consortium (HLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mammalia: Eutheris: Primates: Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   found through the L.M.A.G.E. Consortium/LLAL at: http://image.llul.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plate: LLCM1605 row: o column: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop: 709.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1194 TTCAGAAAATCTGATTTCCTATTTAA 1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         721 TECASABASICICALLIFECTISTICA 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fissue Procurement: DCID/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: eqapbs r mail.nih.qov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lowation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BG510661.1 GT:13662032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mkNA sequence.
RG510661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    harman.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A STESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PESTILI 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOH JENAI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1836 10661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FIALURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            111.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N.
E
Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           200
```

```
// issue_type="adenorate inoma" | // issue_type="adenorate inoma" | // issue_type="adenorate inoma" | // issue_type="adenorate inomato"  |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2682 AGGAGAGTCCAAATTTCAGCAGAAACTGGCAGAAATGACTTCTACTCGAACACGAATGCA 2741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              042 GITICCICITCCAAAGIAAAATIGCIGGITIAIGGAIAGIAAGAAIGGCCTAAGAGA 3101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        102 GGAGIPCEGATAACCCAGGCTCTCTGACTTTGCCTTCTTTGTAGATATATAGGTGA 3161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               282 TTALCCIGAACTCTTCTGCAAAAALGGAJATATIATIAGAAAIT AGAAAAAATIATIA 3338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1339 APTITACACATATAGATITTATITTACTATIGGAATCIGATATACTGIGGG DYTTITAT 4498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541 TAGAAAATG1GTGCTATGTAFGTTGCAAATGGAATTIGATTGAGTGGCZA1FCACAAAA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sdpp :5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 AGGAGAGTCCAAATTTCAGCAGAAACTGGCAGAAATGACTTCTAGTGGGAACACGAATGCA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2742 AAAGGAGAAAATGAATGATAGGATGGATAGGTAAAGAAAGAGAGAAAATGAGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2802 GGACCTTGGTGGACACTGTSTACACGTGTGGATTGATTSTCTCTCACTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2922 AAAATGIGCAGATGCAATTGTTTGGGTGATTGCTAAGSGACTTGAAATGTTAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241 AAAATGIGCAGATGCAATTGITTGGGTGATTGCIAAGCCACTTGAAATGTFAGTCAFTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2982 TATTTATACAAGATTGAAAATCTTGTGTAAATCCTGCCATTTAAAAAGTTGTAGGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181 TAACTTTCCCAGGTTCTGTTTATGGCCACATTTAATATCTTCAGCTCTTTTTGTGGAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 12; Length 824;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hade Is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₹4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 699,6; DB 12
Pred, No. 9.30-127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        271 +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                             /ordanism-"Homo sapiens"
                                                                                                                                  /clone_lib-"NIH_MGC 60"
                                                           /db_xrel="taxon:9606"
/clone="IMAGE:4737634"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    142 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19.7%;
94.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 779; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        262 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \ddot{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>à</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        G
```

```
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BG570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50,00
                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                  QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /hole-"Organ train, Verter provided 6; ist strand convolvational was primed with a Not-follogo(dr) primer. Five prime end confident double-stranded CDNA was digested with Not I and Cloned into the Not I and Eco RV sites of the pcMVSPORT 6 vector. Library was constructed by Lite Technologies. Contact: Feng Library was constructed by Lite Technologies. Contact: Feng Liang Life technologies. Contact: Feng Liang Life 1 revive Bockville, Maryland CBS60, USA Pax : (!) 301 610 B371 Email : Lilangelifetech.com URL :
                                                                                                                                                                                                                  AL56.4757 AL1_NFLOb1_NBC4 Homo sapiens cbNA clone CS0DD007YA05 3
                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Merazoa; Chordata; Cramiata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 792)
Li,W.R., Gruber,C., Jossee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Upperlished (2001)
**** AAAAITTTGCTTTTAATTAAAAACTGGAAGCAAAGTATAACAAIATGAIACAAAGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46.5 ACMATAMMAAMATITATMITAAAAATAAAAATCIAGAAIGMAGAITAITITIGGATMA 1822
                    783 GAGTG:AGGGATAGTAAAATAATAAAATGATAGAAAAIIAIIGAAGTTGTGTGAA 842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   843 AGAACAIGAAFGTAATATAGATGAGGTGAAAAAFGTTTTATTTTCAAAAATTTTTATACCTTTT 902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        993 JATSAALICICHIGGACHGTAACAFCTAATGGACHTCCAGAGGHTGAAAAFCTHTCHAA 962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3, Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genoscope Centre National de Sequencage
BP 191-51006 EVRY cedex France
Email: seqret Genoscope.cns.tr. Web . www.genoscope.cns.tr.
Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scare 698.2, DB 9; Lichgth 792,
Pred. No. 1.8e-126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                               4459 INCINCIDADACAGATITCAINCTCAGAAIGTAAAAGAACI 3500
                                                                                                   /tissue_type="neuroblastoma_cells"
21ab hyst="pHibk"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib-"LTI_NFL001_NBC4"
/sex-"male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alb_wirt "takin 9606"
/clone="CSUDDU07YA05"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       117 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "taxet
                                                                                                                                                                                                                                                                                           ALS6 1757.1 G1:12913464
                                                                                                                                                                                                                                                        prime, mRNA sequence.
ALS63757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19.6%, 93.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       148 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                        Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
Matches 722; Cossery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          246 a
                                                                                                                                                                                                                                                                                                                                      human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ouery Match
                                                                                                                                                                                                                                    EFINITI 'N
                                                                                                                                                                                                                                                                                                                                                    JESTANISM.
                                                                                                                                                                           RESELT 11
AL56421270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                             PEFERINGE
AUTHARS
                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                             VERSON
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Z
X
X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>x</u>
                                                                                                                                                                                                                  ČHS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
```

```
PG570456 JEGAT 10 AFR-2001 000591312F1 NH_MGC_77 Homo sapiens chNA clone IMAGE:4717874 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib-"NiH_MGC_77"
/lab_host-"DH10B (II phago-resistant)"
/note-"Organ: lung: Vector: pUNN+LLB (Clontech): Site_l:
SIII (gqccqctcqqcc): Site_2: SIII (qqccaltarqcc): 5' an
3' adaptors were used in cloning as follows: 5' adaptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryola, M. Labua, Chordata: Craniata: Vertebrata: Euteleostomi:
Mammalia: Eutheria: Primates: Catarrhini: Hominidae: Homo.
                                                                                                                                                                                                         1083 AAGIAAGTIGAIGAAGAGGGAAIGIAAILOCICOAGAGGGGAGTIAGGAGTGAIAI 1142
                                                                                                                                                                                                                                                                                                                              1143 GAACACTATCCAACAATTAATGATGATTTIAAAFTCAGCAAGTGATGAGCCTTCAGAAAA 1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1381 TCCATGCTTAAATCAGAAGAAGAACGATTATCCATTCAAAATTTTAGCAAACTTCTGAAT 1440
                                                                                      1323 FGAAATIGGAFFAFAGSATAGAAACTISG--AGIICGGIIGIAIIACCGAGIAAIGGAA 1380
                                                                                                                  372 GGACAYIWICCAACAATIAATGATGITIIIAAATICAGGAAGIGTICAACCTICAGAAAI 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     312 TYIGTTTCYTWTTTTACGACTGCACAGIGAATCCAAAAGGAAAGTATACTGAAAAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cDNA Library Preparation: CLONIECH Laboratories, Inc. who iterate is a first arrayed by: The L.M.A.G.E. Consortium (LINE) buna Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NIH MGC ELLE //Feb Lovi with apos/.
National Institutes of Health, Mammallan Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         132 TOTALGUILIANTCAGAAGAAGAAGAIIANCATICAAAAITTTEGCACTICTGAAT 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1263 GAAGGATATAGGATACATCITTAAAGAGAAAITIGCIAAAGGIGIGGGACAGGGITGIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                             1203 TCTGATTTGGTALLLIAACAACTGCAGTGAATGCAAAAGAAGTATACTGAAAAGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1441 GACAA-CATITITCAIAIGICIIIA/11GGCGCIGCIGCIGAGGTIGTAAT 1490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Plate: LLCM1568 row: h column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: cqapbs-rëmail.nih.qov
Tissue Fiorurement: CLONIECH Lakoratories, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact. Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       44 757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref~"taxon:9606"
/clone="IMAGE:4717874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BG570456.1 GI:13578109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 767)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                797.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA sequence.
BG570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RC57045F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human.
```

HM466194.1 GI:18515236

VERSION

```
EST 05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGENCHOURT_6456973 NIH_MGC_92 Home sapiens conn clone IMAGE:5576939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               446 TIACTALESSAAPTGAATAGEGGGGGTGTTIATAAAATFTTGCTTTTAATTAAAT 3420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27/52 PPATGGATACCTCAAACAAGGAAGGAAATGAGGATCTCAGGACTTTGGTGGACACTGTG 2821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   242 TOTICOAAAIGCAAITIGAITGACI-GCCCATICACCAAAAITAICCIGAACICITGIGC 3300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (0) AAAAATGGATATTATTAGAAATTAGAAAAAAAATTACTAATTTTAGACATTAGATTTTATT 3360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421 AAAAGCTGGAAGCAAAGTATAACGATATGATACTATGATACTACTGGAAACAGATTTCATA 3480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2882 TATGGCCACATITAATATCTTCAGCTCTTTTGTGGGATATAAAATGTGCAGATGCAATTG 2941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2942 TITGGGTGATTCCTAAGCCACTIGAAATGTTAGTCATTGTTATTTATACAAGATTGAAAA 3001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               noz +0110101AAA1001G00A11AAAAA311G1AGGAGA11G1110C1011GGAAAG1AAA 3061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             062 ATTGCTGTTTATGGATAGTAAAAIGGCCCTAGAGTGGGAGTCCTGAIAACCCAGGC 3121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           324 AALITAFALGTALATIFILITAALTTAACAFGAAGGGTTAGAAAATGTGGTATGTA 3241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2822 TACACCTIVICGATICATICITICTICTCACAGATGTGTGTGTATAACTTTFCCCAGGTTCTGTT 2881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HILLIHELIH HILLIH HILIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      461 PEGICAGIACITIGGCTICITITIGIAGCAIAIAGGIGIIGGICITIGIITITAII 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601 TTACTA FORMANT CEGATATACH GITGITGITALAAA - TTEGITTAATIAAAIT 659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 TAPACCTCTGGAT FCATTGTCTCTCAGATGTGACTGTAACTTTCCCAGGTTCTGTT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 TITGGGTGATTCCTAAGCCACTTGAAATGTTAGTCATTGTTATTATACAAGATTGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 19.5%; Score 692.2; DB 12; Length 767; Best Local Similarity 97.1%; Pred. No. 2.6e 125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4481 COTONDANDA AAAAGAACTIACTICATITICTICALCCAACTIAT 3528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                             18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          dq 716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 747; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 57, mRNA sequence.
BM466194
                                                                                                                                                                                                                                                                            235 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BM466194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No. I LINI Had
                                                                                                                                                                                                                                                                        HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A TUESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FESSEL 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14M4 6.1.1.14
                                                                                                                                                                                                                                                                                                               N 1 (5) 1 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          711.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>:</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \stackrel{>}{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \hat{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
```

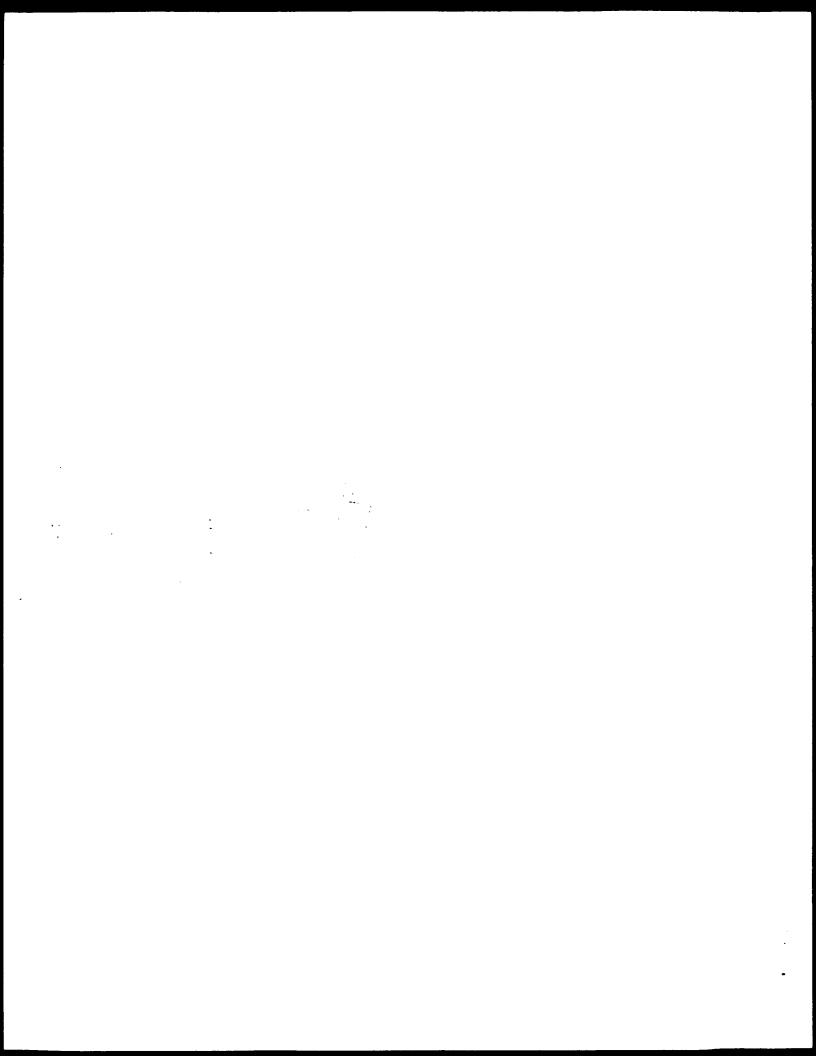
```
Homo sapiens
Eukaryota: Metazoa; Chordata; Craniata; Vertebiata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Znote-"Organ: testis: Vector: pMMV Stokls; Site 1; Not1;
Site 2: Sall; Cloned unidirectionally: olivo di primed.
Average Insert size 2.5 kb. Library enriched for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tull length clones and constructed by Life Technologies.
Note: this is a NIH_MGM Library."
184 c 169 q 423 t 2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2698 CAGCAGAACTGGCAGAAATGACTTCTACTGGAAGGAAATGGAAAACAAAATGAAT 2757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2758 GATAGCATGGATACCTCAAACAAGGAAGAAATGAAGATCTCAGGACCTTGGTGGACAC, 2817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3118 AGGCCTGTCGACTACTTTGCCTTCTTTGTACCATAAAGGGATGTTGCTCTTGTTTT 4177
                                                                                                                                                                                                                                                                                  cDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by. The T.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation for Conne distribution: MGC clone distribution information can be found through the T.M.A.G.E. Consortium/LLML at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 GATAGCATGGATACCTCAAACAAGGAAGAGAAA1GAGGATGTCAGGAGGTTGGTGGAGAGCT20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361 TAAAAFIGGIGFGCTTTAFGGATAGFAAGAAFGAGGGAGAGGGGAGGGAGAFAAAG 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CATICACAAACTIGGCAGAAATIGACTITICTACTICGAACACIAAATIGGAAAAGCAGAAAATIGAAT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2818 TOTOTACACCTOTGAGATICATTGTOTGAGAGAGAGATATATAAATTTAAAAATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2878 FGTTTATGCCCACATLIAALATCTTCACTFTTGFCGALAGAAAAGGGAAAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181 IGTTIATGGCGACATTIAAFATCTICAGCTOFFFFFGGAFATAAAAFGGGAGGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2998 AAAATCITIGI GIAAATCCIIGNOATTI PAAAAACII GI AAAATI OI I FOOLIO FOOAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   058 TAAAATTGCTGTGTTTALGGATAGTAAGAALGGCCTLAGAGTGGGAGTCTTGALAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Home.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19.58; Score 691.8; DB 13; Length 972;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone-"!MAGE:5576939"
/clone-lib-"NHIMMG-92"
/issue-lype-"embryonal carcinoma, cell line"
/lab_host-"DBIOB (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. 3.1e-125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                            Plate: LLAM12329 row: j column: lz
High quality sequence stop: 621.
                                                                                                                                                                                     Unpublished (1999)
Contact, Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism-"Homo sapiens"
                                                                                                            1 (bases 1 to 972)
NIH MGC http://mdc.nci.nih.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xret-"taxon: 9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
1. .972
                                                                                                                                                                                                                                    Email: egapbs ramail.nih.gov
                                                                                                                                                                                                                                                                Tissue Procurement: ALCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 96.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservalive
                      human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 728;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                          AUTHORS
IIILE
                                                                                                                   REFERENCE
                                                                                                                                                                                       TOURNAL
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURFS
                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CRIGIN
                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
```

```
/organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B1868359.1 GI:16042032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2319 TCCTTCCACCACCCCC 2336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         693 PGCTPPCCACCACCACCCCC 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 втвевззя
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEPTNITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PEFEPENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHURS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNA!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   H1868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOHER
                                                                            5
                                                                                                                                                                                                                                  Ē
                                                                                                                                                                                                                                                                                                                                                                                             <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          습
                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear EST 05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ċ
                                                                                                                                                                                                                                                                                                                                                                                                                                                   BM453724 linear EST 05-FEB-2000
A3ENFORFF G402142 NIH MOC 12 Hom ( s.p.)+cs (DNA 41 de IMA3E 5028R14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alisaue type-"amelanolis melanoma"
//lab.host-"bhilm (phage-resistant)
//note-"bigan skin (betor: pSMV-Siökfö: Site_1: Noti:
Site_2: Sall; Cloned unidirectionally, Primer: Oligo dT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         library constructed by life
4178 TATIAATIIATATATATATTTTTTTAATTTAACATGAACACCCIIAGAAAATGTGTGTATA 3237
                                                                            3238 TOTATELLOCAAATGCAATTTGALTGACGCCCATTCACCAAATTATCCTGAAACTTTTA 3297
                                                                                                                                                                                                                                    TGCTTTTTATAAAATTTTTT 3412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1659 AGGAIGHGAAGALGGAALGALGGAALGCGTIGGAAGGGTGTGGGATGGAGTLAITLIGA 1/18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1719 TCTTATTAAACAATCAAAGGACGGAGAAGGAGCAACTGATGACCTTGAATGTGCTGCT1GTCC 1778
                                                                                                                                                        3298 TGCAAAAA EGGATATTATTAGAAAT FAGAAAAAATTACTAATTTTTACACATTAGATTTT 3357
                  F. C. CCAAAAA CGATALLALIANAAATTAGAAAAAATTACTAATTTT 660
                                                                                                                                                                                                                                                         CDNA Library Preparation Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Avencourt Bioscience Corporation Clone distribution: MCC clone distribution information can be found the L.M.A.G.E. Consortium/LIMN at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ot caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia: Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19.1%; Score 679; DH 13; Length 835; POLO®: Pred. No. 1.6c 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  233 t.
                                                                                                                                                                                                                                                                                                               4413 AATTAAATAAAAGCT-GGAAGCAAAGTATAACC 3444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Plate IIIAM12206 FOW: 6 column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismutches
                                                                                                                                                                                                                                                                                                                                   7.1 ATTAAGATAAAAGGTGGGAAGGAAGTATAAAGG 753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Average insort size 2 kb
Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: cyapbs-ramail.nih.gov
Tissuc Procurement- ATCC/DCTD/NTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="tMAGE:5528814"
/clone lib "NIH MGC 72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High quality sequence stop: 647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 835)
NIH-MGC http://mgc met mit genz/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  137 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Localion/Qualifiers
                                                                                                                                                                                                                                  4458 ATTITACTATIGGAATCTGATATACTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BM453724.1 C1:18502764
                                                                                                                                                                             210 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hone sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 678;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Çurry Match
Brst Logal S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         METANTORO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MIL . HEVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ALLHURS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JUINNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EL FERRIS
                                                                                                                                                                                                                                                                                                                                                                                                                                  PM45324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                     7.1
                                                                                                                                                                                                                                                                                                                   <u>خ</u>
                                                                              5
                                                                                                                                                                                             1
```

```
603392338F1 NIH_MGC_90 Home sapiens coma clone :MACD:5402622 57, mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bukaryola, Matazaa, Cherdata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eufberia, Effmates, Catarthini, Hominidae, Homo.
1 (bases 1 to 572)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1779 TCTTAATCTTCCTCTCCCAGAATAATCACACTGCAGCAGATATGTATCTTTCTCTGTAG 1838
                                                                                                                                                                                 1839 APCECTAMAAAAAAAAHITCAAFTACACGTGTAAATTGTACTGGAAATGCAGAGACACA 1898
                                                                                                                                                                                                                                                                                                    1899 AGCAACCTCCACACTCCAGAAGCCATIGAAAICTAGCTCTCTTCACTGITTIA 1958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2079 CTATCAACTCATCACAGAGAGACATTTGGAGGAAATTATGATGTGATGTGTTGCATGTATGGCAT 2138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2139 ATGCAAAGTGAAGAATATACACCTTAAATTCAAAATCATTGTAAGAGGATACAAGGATCF 2198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2199 TOTIVARGYOTOTOAGGMANATIOAAANGTGIIIGAIGAAAGAAGAGGAGTAIGAITO 2258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2259 TATLATACTATICTATAACTOOFFCTTCATCCAGAGAAAAGAAAAAAAAAAATATTCCAGIA 2318
                                                                                            193 ATCTCCAAAGAAAAAGGTFCAACTACGCGFGTAAATTCTACTGCAAATGCAGAGACACA 252
                                                                                                                                                                                                                                                                                                                                       313 TAAAAAAGTGTATCGGGTAGCCTATCTCCGGCTAAATACACTTTGTGAACGCCTTCTGTGTC 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA Library Arrayed by: The L.M.A.C.E. Consortium (LLML)
DNA Sequencing by: Incyte Cendmies, Inc.
Clone distribution: MGC clone distribution intormation can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         553 TCC/CATGCTGTTCAGGAGATTCAAACGTGTTTTGAICAAAGAAGAGGGGIA1GAIIC 612
7 x ICTIATIAAACAATGAAAGGACGAAGGACCAACTGATCAACTGAATCTGCTTGTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Notional Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                         1959 TAAAAAAGIGIAYQGGCTAGCCTATCTCCCGCTAAATACACTTTGTCAACCCCTTCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA Library Preparation: Life Technologies, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plate: LLAM12026 row: k column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High quality sequence stop: 668.
                                                                                                                                                                                                                                                                                                                                    Email: cqapbs-r@mail.nih.qov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualitiers
```

```
/tissue type="adenocarcinoma, cell line"
/lab host="foHluH (phare-resistant)"
/note="ordan: liver; Vector: pCMV-SpoRT6; Site_1: Not1; Site,2: Salt], cloned uniditectionally; oliqo-dT primed.
Average insert size 1.7 kb. Library enriched for full longth clones and constructed by Life Pechnologies.
Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                          24.20 ATAITICACCCTGAAGAGTCCAIATAAAATTTGAGAAGGTCTGCCAACAACAAAAA 2479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2480 TGACTCCAAGATGAAGAATCCTTAGTATGAATTGGTGAATGATTGGGGACTTCTGAGAAGT 2539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2540 FCPAGAAATAAATCAGATGGTAACAGGGGGGCGGTGTGCTCAAAAGAAGTGCTGAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2600 GAAGGAAGGTGTCGTAAAACACTGAAAAAAGTAGGGTTTGATATTGAAGGATGAGATGAAG 2659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZEEU PAGALGGAAGTAAAATGTEPAGAGAGTECAAATTEAGGAGAAACTGGCAGAAATGA 2719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2780 AGGAAGAGAAATGAGGAGATCTGAGGACTGGAGACTGTGTACACCTCTGGATCATT 2839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2900 CITCAG TOTITION GALARAAARGISCAGATAGAAATGITTGGGTGATTGCTAAGC 2959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2969 CACTEGAAATGITAGTCATTGITATTATACAAGATTGAA-AATGITGIAAAATGGTGC 3018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4019 CATELAAAAAGILGLAGCAGALLGTILCCILCCAAAGTAAAATLGCLGLGCTTTATGG 3078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2840 GICTCTCACACATCTCACTCTLATAACTTTCCCACGITCTCTTATCGCCACALTTAATAT 2899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 TGATTCCAACATCAAGAATCTTAGTATCAATTGGTGAATTCGTGGGGACTTCTGAGAAGT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241 CAGATGBAAGTAAACATCTCCXAGBAGTGGAAATTTCAGCABAAACTGGCAGAAATGA 300
                                                                                                                                                                                                                                                                                                                                                                           1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 APATITICACCCTGRAGACTCCATATAAAATTTCAGAAGGTCTGCCAACACACAAAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18.6%; Score 660; DB-13; Length 672;
99.9%; Pred. No. 5.3e-319;
                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                               Zelone lib-"NIH_MGC_90"
/db xref "taxon:9606"
/clone="IMAGE:5402622"
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 671; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4079 ATAGITANGAATG 4090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661 ATAGLAAGAATG 672
                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                          Querry Matich
                                                                                                                                                                                                                                                                                                                                                      12007
                                                                                                                                                                                                                                              RASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ē
```

Search completed: January 18, 2003, 04:11:49 J-b time : 4148.5 secs



Copyright (c) 1993 - 2003 Compugen Ltd. Generore version 5.1.3

nucleic search, using sw model M number

January 16, 2003, 15:20:22 ; Wearch Fire 2963,98 Seconds Kun on:

(without alignments) 18469 506 Million cell updates/sec

US 09 026-459A: 44

litte: Pertect score:

Seephener:

Scoring table:

IDENTITY_NUC Gapop 10.0 , Gapext 1.0

16154066 seqs, 8097743476 residues Seaterhed:

Total number of hits satistying chosen parameters:

42 408132

Minimum DB seq length: 0

Maximum DB seq length: 20000000000

Listing first 45 summaries Maximum Matet 100% Post processing: Minimum Match Of

em_esthum:* em estba:* ES1: * instabase :

em_qss_mam:* *:nul_ass_me * · who q - ssb - wo em_qss_inv:* *:nlq.ssp mo 1117 em estium:* em_estom:* om_estpl:* *:nitse me em estmu:∗ •m_estov:• qb est 2:* qb_est 4;* qb_ost4:* qb_est5:* qb_htc:* db dss:∗ qb_est1:* em hite:* em dss

Pred. No. is the number of results predicted by shance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

em_qss_other:*

em_qss.pto:*

		Description		BM450031 AGENCOURT	BM551083 AGENCOURT	BQ4 49221 AGENTOURT	BQ220275 AGENCHORT	HM475603 AGENCOURT	AKC11246 Mus museu
SUMMARIES		10		HM4 500 41	BM561083	BQ4 39221	BQ220275	BM475503	AK011246
		r C		<u>-</u>	-	~7	₹ †	1	-:
		Onery Match Length DB		.9 1623 13 1	1051	1861	H8.	1001	1.864
	æ	Query Match	:	1.17	8.77	2	5.57	24.1	8.17
		Score		910.2	408.4	856	844.8	786	777.8
		Fersal I		-	7	~	4	ŗ	· v

HM545HB1 AGBNCOURT AU597RT1 DREZD 8130 BU22227 AGBNCOURT BM510961 6026 11848 AU56,757 AU56,557 AU56 B 7770456 602791312 HM466194 AGBNCOURT HM46194 AGBNCOURT HM46194 AGBNCOURT HM46195 AGANCOURT HM46195 AGANCOURT HM46195 AGANCOURT HM46195 AGANCOURT		AN 20 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	AWSOZBB7 UT-BF BNO HELFHOUSS OVS HIDST HIBZITIG 603035591 BM456728 AGENTAGRY BISZEOBL 602922177 BBS-4744 RC3 HID94 ATRY 4215 GD04302.x ALSSH7A5 DREZEA 13F HEB65749 601678131 A1082179 vx75e64.x
13 HMS45HB1 9 ALS47B11 14 BG2D227 15 BG610661 9 ALS64757 12 HG576456 13 BM466194 13 BM465194 13 BM68194	10 BES1028 12 BGE16219 12 BGE16219 10 BW28446 10 AWS (18) 9 ALS996 (4) 12 RG2F (4) 4 ALS996 (4)	< < < <	10 AW50.2887 10 BELEAROYS 13 BEZ2116 13 BM4567.28 13 BES2442 12 BES44744 9 AL598765 12 BE867749
11 44 44 44 44 44 44 44 44 44 44 44 44 4			2008 2008 2008 2008 2008 2008 2008 2008
ជាជាធានាធានាធានា សមានាធានា - ១១០ ១៨៤៤៤៤ មានាធានា	16.97 18.97 18.55 18.55 18.55	2	14 1 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
752.4 725.4 725.4 699.6 692.2 691.2 673.8	642.76 642.76 601.2 605.2 596.4	5575.25 556.4 556.4 550.2 550.2 551.8 551.8 551.8 551.8 561.8 561.8 561.8 561.8 561.8 561.8	484.4 481.4 480.2 476.6 474.4 459.2 457 457
V 8 8 0 0 1 7 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1	45 B B B B B B B B B B B B B B B B B B B	242300000000000000000000000000000000000	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
د	0 0 		υ υ υ

ALLICIMMENTS.

FM450031 102+ bp mRNA linear EST 05-PER 2002 AGENCOURT_6393544 NIH_MGC_72 Home Sapiens charactone (MAGD, 5528037 Homo sapiens Eukaryota, Metazoa; Chordata; Cianiaia; Veriebrata; Eufeleosiomi; Mammalia; Eutheria; Primates; Catarrhini; Homolidae; Homo. DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the LLMA.G.E. Consortium/LLM. at: http://mage.llm.com/llma.c.22 Flate. LLAMI2264 row. d column. 22 High quality sequence stop: 643. 1 (bases 1 to 1024) NIH-MGC http://mgc.nci.nih.gew/. National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: eqapbs-remail.nih.gov
Tissue Procurement: ArgC/XVID/DIP
CDNA Library Preparation: Lile Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (ILML) BM450031.1 GI:18499071 5', mRNA sequence. HM450031 human. DEFINITION ORGANISM AUTHORS TITLE ACCESSION REFERENCE JOURNAL, RESULT 1 BM450031 KEYWORDS VERSION COMMENT SOURCE LOCITY

source FEATURES

```
/note" "Organ skin; Vector: pCMV-SPORT6, Site_1: Not1;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 2 kb. Library constructed by Life
                                                                                                                                                                                                                                                                                                                              1854 CAAAGTGAAGAFATAGACCTTAAATTCAAAATCATTGTAAAGAGCATACAAGGATCTTCC 1913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.214 ICAIGCISTICAGGAGACATICAAACGIGITTITGAICAAAGAAGAAGAGAATAIGAITGIAI 1973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1974 IATAGTALICTATAACTCGGrCTTCATGCAGAGACTGAAAACAATATTTTGCAGTATGC 2033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2034 TTCCACCAGGCCCCCTACCTTCACCTTCACAATACCTCACATTCTCGAAGGCCTTTAGAAGGTTT 2093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2214 AGIATGASI IGS PSAA PGAT PSGGGASTI STGAGAAGTI COAGAAAATAAATCAGAFGCT 2273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2334 GAAAAAATTACGCTTTTCATATTCAAGGATCAAGGAGGAGGAGGAATGAAGGTAAAGTAAAGTAATGTGG 2393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                : 3.94 - AGGAGTACTI OF ABATTI FOR CHARAROTING CHARATICANTIFOTIACTICGAACACAATGGA - 2453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2514 GGACCTTGGTGCACACTGTGTACACCTGTGGATTCATTGTCTCACAGAGGGGACTGTA 2573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2574 TAACTITICCCAGGTTOTOTITALGGOOACATITAATATGTTOAGOTOTITITIGIGGATAT 2633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2094 TOTTAGITICACCITIACGGAITCCTGGAGGGAACAICTATATITICACCGGAAGAGTCC 2153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2634 AAAATGTGCAGATGTATTGTI; GGGTGATTGTTAAGGTA,TGAAATGTTAGTCATT 2691
                                                                                                                                                                                                                                                                                                                                                                                                                              181 FIGGACGGGGGGGGGTGIGIGACGATACCFGAATICCFGGAAGGCGT ACAAGTT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541 AGGAGAGTOPAAATITIOAGGAGAAAPTGGAAAATGAGTTGTAGTGGAAGAGGAATGGA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                641 AGIATCAATTOOTTOATTOATTOOTTOTGAGAAGTTOCAGAAAATAAATGAGATGGT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721 IAACTITCCCAGGTICTGTTTATGGCCACATTTAATATCTTCAGCTCTTTTTGTGGGATAT 780
                                                                                                                                                                                                                                                                                           6, Gaps
                                                                                                                                                                                                                                                                                                                                                   DB 13, Length 1023;
                                                                                                                                                                                                                                                                                           43; Indels
                                                                                           /lab_host-"DH10B (phage-resistant)"
                                                     /clone_lib="NIH_MGC_72"
/tissue_typo "melanotic melanoma"
                                                                                                                                                                                                                                                                   Pred. No. 4.5e-165,
0; Mismatches 43;
                                                                                                                                                                                           281 t
                                                                                                                                                     Average insert size 2 kb.
                                                                                                                                                                                                                                                   27.9%; Score 910.2; 95.2%; Pred. No. 4.5
Arreanism "Homo sapions"
                                  /close "IMAGE:5528037"
              /db_xref-"taxon:9606"
                                                                                                                                                                                           197 g
                                                                                                                                                                           Technologies.
                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                     Best Local Similarity
                                                                                                                                                                                             334 a
                                                                                                                                                                                                                                                                                       Matches 972;
                                                                                                                                                                                                                                                     Uniony Match
                                                                                                                                                                                           BASE CHINT
                                                                                                                                                                                                              Z
S
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
```

```
1051 tp mRNA 11ncar 131 20 FTB 2002
AGENCOURT_6566133 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:5850905
57, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota, Metazoa: Chordata: Craniata; Vertebrata: Euteleosiomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                1912 AAASSTSTSSSASASSTSTSTSTSTSTSAATESATESAGGATAGAACTTGSAGTTCGC 1071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1132 AATTTTAGCAAAGTTGTGAATGACAACATTTTTCATATGTGTTTTTTGGGGTGGGGTGTTT 1191
                                                                                         CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by. The L.M.A.G.E. Consortium (LINL) DNA Sequencing by: Apencourt Bioscience Corporation Clone distribution: MSC clone distribution information can be found through the L.M.A.G E Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1072 TIGIATTACCGAGTAATGGAATCCATGCTTAAATCAGAAGAAGAACGAFTAFCCATTCAA 1131
                                  841 GITATITATAGGAGALIGAAAAGTIGIGIAAALGIGGGAATIAAAAAGITGIAGGAGA 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sylve Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SAGR AGASTSAGARICS GALAACASSASTAGASTAGIIIGGGIIGGGIITTGIAGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 909.4; DB 13; Length 1051; Pred. No. 6.4e-165;
                                                                     2752 IIGIII-CCTCTICCAAAGAAAAATAATISCISTSTIIATSSALASTAASSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13; indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /lab_host-"DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /cione_lib-"NiH_MGC_67"
/tissue_type-"retinoblastoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                299 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
Contact: Pobert Strausherg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="IMAGE:5550905"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              High quality sequence stop: 7
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     197 9
                                                                                                                                                                                                                                                                                                                                                                                                                          RM561083 1 01-18806043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98.88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 1051)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         221 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                938; Conscryative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       330 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human.
                                                                                                                                                                                                                        2868 A 2868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local
                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                 RESULT 2
BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                      SHOUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ä
```

```
HU4/1922)
ADENYODRI_7756552 NIH_MGC_92 Homo Sapiens convacione IMAGE:6015480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo Sapiens
Enkaryota, Metazoa: Chordata, Craniata, Vertebiata, Enteleostomi;
Mammalia: Entheria: Primates: Catarrhini, Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1852 IGCAAAGTGAAGAATATAGACGTTAA-ATTCAAAAFCATTGTAACAGGAFACAAGGATCT 1910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14.42 CTTATTAANJAATGAAAASACCAAAAASAACAACTGATGACGTGAACTGGTGTCT 14.91
                                                                                                                                                   1192 GARGI BITAATOR STATATARAGAGAGA PERPAGAATERI GATTET GGAAGAGAT 1251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1372 GGATGTGAAGATGGAATGATGGAATGGGATGGGATGTGAGATTGAGGTTAATTTGAT 1431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1552 FYRPPAAAAAAAAAGGTFFAAGTACGCGTGTAAAFTFCFACFGCAAA FGCAGAGACACAA 1611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1792 TATGAACTCATGAGAGAGACAATTTGGACCAAATTATGATGTGTTCCATGTATGGCATA 1851
                                                                                                                                                                                                                                                                                                                                                                                                                            1252 TTGFCTTTCCCATGGATTCTGAAFGTGCTTAAFTTAAAAGCCTTTGATTTTTACAAAGTG 1311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     412 ALCGAAAGELLIALCAAAGCAGAAGCCAACTIGACAAGAAGAATGALAAAAGATTLAGAA 1373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1492 PELAATOTTOCTOTOTOOAGAA FAA LOAGACI GOAGOAGATATGI ATCTTTOTOCTGTAAGA - 1551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILEFERENCE FOR A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF A STOCKARA OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421 OTTATTAAACAATGAAACGAACGAAGGAGGAGGTGAGGTTGAATGTGGTTTGTCT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  THEFITTHEFITTHEFITTHEFITTHEFITTHEFITTHEFITTHEFITTHEFITTHEFITTHEFIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661 AAAAAASTGFATCGGGTAGGCFAFCTCGGGGTAAATACACTTTGFGAACGGCFFCTGTGT 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HILLIHILIH HILLIH HILLHILIH HILLIHIH HILLIHIH HILLHIH HILLIH HILLHIH H
National Institutes of Mealth, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1911 ICHICATGCIGTICAGGAGATICAAACGTGT-FITGATCAAAGAAGAGGAG 1962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999)
Confact: Robert Strausberg, Ph.D.
Email: cqapbs:r*mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 1081)
NIH MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BQ4 49221.1 GI:21178297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BQ4 59221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NOTITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HU4 19221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1111.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            : SMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ż
```

```
/tissuo_type="emblyonal carcinoma, ect] line"
//lab_host="DBHOB (plage resistant)"
//note=-organ: testis: Vertor: pow-SP-MT6: Site_1: Not]:
Site_2: Sall; Cloned unidirectionally; oliqo dT primed.
Average insert size 2.5 kb. Library enriched for
full-length clones and constructed by Lite technologies.
Note: this is a NH_MBC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2368 GAAGCAGAIGGAAGIAAACAICICCCAGGAGAGICCAAATIICAGCAGAAACTCGCAGAA 2427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2788 TOGATACTAACAATGOCOTTACACTGGGAGTCGTGALAACCGAGGGGGGGLAHTGAGTH 2847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              908 ITITITAATITAACAIGAACACCITAGAAAATGIGICIATATATATGIAAATGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2488 AACAAGGAAGAAATGAGGATCTCAGGACCTTGGTGGACACTGTGTACACCTCTGGATT 2547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2548 CATTGTCTCTCACAGATGTGAGTGTATAACTTTCCCAGGTTGTGTTTATGGCCACATTTA 2607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2668 AAGCCACTTGAAATGTLAGTCATTGTTATTATACAAGATTGAAAATCTTGTGTAAATCC 2727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2728 IGCCATITAAAAAGIIGIAGCAGAIIGIIIGCICICIICITCCAAAGIAAAAIIGCIGIGCIIIA 2787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA Library Preparation: Lite Technologies, Inc., cDNA Library Arrayed Ds; The L.M.A.G.E. Consertion (LLNL) DNA Sequencing by: Agencourt Blossicues Corporation Clone distribution: MCC clone distribution intermation can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241 ATATCTTCAGCTCTTTTGTGGATATAAAATGTGCAGATGCAATTGTTTGGGTGATTCCT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421 IGGATAGTAAGAAIGGCCCTAGAGTGGGAGTCCTGATAACCCAGGCCTGTCTGACTT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GAAGCAGAIGGAAGIAAACAICICCCAGGAGAGICCAAAIIICAGCAGAAACIGGCAGAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2608 ATATICTECACTICTETETETIGEATATAAAA EGIGGAGATIGGAATETETETIGGETAATETCET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26.2%; Score 856; DB 14; Length 1081; 99.1%; Pred. No. 1.2e-154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indets
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tound through the L.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAMI3211 row: k column: 01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mishatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                   /clone_lib-"NIH_MGC 92"
                                                                                                                                                                        High quality sequence stop: 732.
                                                                                                                                                                                                                                                        /db_xret-"taxon:9606"
/clone-"IMAGE:6015480"
                                                                                                                                                                                             Location/Qualitiers
Tissue Produrement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 892; Conservative
                                                                                                                                                                                                               1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                    Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            d
```

```
d
                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                            ŏ
                                                                                                                                                                                                                                                                                                                                                                                    CC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         نة
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                             PQ22/2777
AGENY GRI_7572621 HIH_MSC_92 Home sapiens cDNA elone IMAGE:6044522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /close lib "NIH MGC_92"
//tissue_type "combryonal carcinoma, cell line"
//tissue_type "combryonal carcinoma, cell line"
//lab_host="DH10H (phage-resistant)"
//note="Organ testis" Vector: pCMV-SPORT6; Sitc_1: Not1;
Site_2: SalI: Cloned unidirectionally; oliqo-dT primed.
Average inselt Site_2: & Nb Library enriched for
Iull-length clones and constructed by Life Perhapisgies
Note: this is a NIH_MGC_Library.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa, Chordata, Cramiata, Vertebrata, Euteleustomi,
Mammalia: Eutheria; Primates; Catarrhini, Hominidae; Homo.
                                                                                   3108 AGIATAACCATAFGATACTAFCATACTACTGAAACAGATTTCATACCTCAGAATGTAAAA 3207
                                                                                                                                                                                                                                                                     *208 GAACHTACHGAITATHTHCHTCATCCAACHTATGTHTHTAAAHGA-GGATHATHGATAGT 3266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by. Agencoutt Bioscience Cotporation Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 881)
NIH MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                          661 FAGAAAFFAG-AAAAAFFACFAATFTTVAGAGAFTTTAGATTTTATFFFACTATFFGGAATCFF 719
                                                                                                                                720 GATAIACHGTGTGTTTTATAAATTTTGCTTTT - ATTAAATAAAAGGGAAGCAA 778
                                                                                                                                                                                                                        779 AGTATAACCATATGATACTATCATACTACTGAAACAGATTTTCATACCTCAGAATGTAAAA 838
                                                                                                                                                                                                                                                                                            38 AAATGSAAGATGAPCTGGPGAPTFCAPFTCAGFFAATGCFAPGTCTCCFTGACTAPTTFA 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              398 LIPAAACIGTCACCTCCCATGTTIGCTCAAAGAACCATATAAAAACAGCTGTTATACCCATTA 457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         51 ITAAAGIGICAGGIGCCATGTIGCIGAAAGAACCATATAAAACAGGIGITATACCCATTA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cars
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25.9%; Score 844.8; DB 14; Length 881; 99.0%; Pred. No. 1.7e-152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plate: LLAM13287 row: e column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            264 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       O; Mismatchos
                       /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         High quality sequence stop: 690.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xrel-"taxon.9606"
/clone-"IMAGE:6044522"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       155.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BQ220275.1 GI.20401675
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5', mknA sequence.
BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            149 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           うったらいまでませきない
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 871;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CRCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HASE OF UNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESS LON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEFEREN'E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JEIJKNAL.
                                                                                                                                                                                                                                                                                                                                                                                                       RQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 - WMEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N COLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBCE
                                                                                                                                Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
```

```
BM475603
AGENYAHIKT_A4RORD7 NIH_MRT_42 Home sapiens CDNA clone IMAGE:5575683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukarycka, Metabba, Chordata, Craniata, Vortebata, Euteleostomi:
Mammalia: Eutheria, Primates, Catarrhini: Bominidae: Bomo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1118 GATTATCCATTCAAAATITTAGCAAACTTCTGAATGACAACA-TTTTTCATATGT-CTTT 1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1058 AACTIGGAGTTCGCTTGTATTACCGAGTAATGGAATCCATGCTTAAATCAGAAGAAGAAC 1117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              998 AAGAGAATTTGCTAAAGCTGTGGGACAGGGTTGLGCGGAAATTGGALCACAGGGGATACA 1057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         578 AGGIGAAAAATGITIAITICAAAAATITIATACCITIIAIGAATICICITGGACITGIAA 637
                                                                                                                                                                                                                                                                                                                              301 CATCTAATGGACTTCCAGAGGTTGAAAATGTTTGTAAAGGATAGGAAGAAATTTATGTTA 360
                                                                                                                                                                                                                                                                                                                                                                                                            758 KITATAGAKAKITITGAAAKAKAKAGAAKKAKAKAASIAAGITGATGAAGGGGGA 817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     938 GPACAGTGAAAGCAAAAGAAAGATAIAGIGAAAAGAGAAGGAAAGAIAIAGGATACAITIIA 997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601 GPACAGIGAATGPAAAAGAAGTATAGTGAAAAGAGIGAAGGATATAGGATACATTA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781 GATTATCCAFTCAAAALITTAGCAAACTICIGAATGACCACATTIITICATATGTGCTTT 840
                                                                                                                                                                                                                                                                              638 CATCTAALGGACTICCAGAGGTIGAAAAICITTCIAAACGATACGAAAAAAITTAICITA 697
                                                                                                                                                                                                                                                                                                                                                                                 698 AAAATAAAGATCTAGATGCAAGATTATTTTTGGATGATAAAACTCTTCAGACTGATT 757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          818 AIGTAAFIOTEOAOAGAGIOGAGIIAGGAGISIIAIGAAAAALAITAAGAAGAAITAAIGA 877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           878 TGATTITTAAATTGAGGAAGIGATGAGGAGGCILGAGAAA FCFGATTITGCTATTITTAACAAGI 937
                                                                           518 TAGAAAATGATAGAAGAATTATTGAAGTTCTCTGTAAAGAAGATGAATGTAATATAAGATG 577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                        oDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLML)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 1001)
NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BM475603.1 GI:18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5', mRNA sequence.
BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           * KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS
```

```
/tissue_type="embryonal carcinoma, cell line"
//tab.hosh="bH10B (phage-resistant)"
//tab.hosh="longum: testis; Vertor: pcWv-SPORT6; Site_l: Not1;
Site_z: Sali, Cloned unidirectionally; oligo-dT primed.
Average insert size 2.5 kb. Library enriched for
full length clones and constructed by Life Technologies.
Note: this is a NH_MSC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  126 AGAAATTGATACCAAGTACCAAAGTTGATAATGCTATGTCAAGACTGTTGAAGAAGTATGA 185 .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               785 CACCACGAAAAGTAACCTGATGAAGAGGTGAATTCCTGGAGACACACTCCAGTTA 844
DNA Sequencing by: Ageneout Bioscience Corporation cloud clone distribution: MCC clone distribution information can be cloud through the L.M.A.G.E. Consortiom/LLML at. https://mage.llgl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          365 TIGAGITAAFIGGTATGTGTGGFTTGAGTATTTTAAAGTGTGAGGGGGGATGTTGGTCA 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     425 AAGAACCATATAAAAGCTGTTTATAGCCATTAATGGTTCACCTGGAAGACCCAGGCGAG 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       44.3 ARGAAGGATATAAAAAGAGGIGTTATAGGGATTAATGGTTGAGGTGGAAGAGCGAGGGGAG 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         185 GTCAGAACAGGAGTGCACGGATAGCAAAACAACTAGAAAATGATACAAGAATTATTGAAG 544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   403 GICAGAACAGGGGGGGGGATAGGAAAACAACTAGAAATGATACAAGAATTATTGAAG 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46.5 TTCTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTGAAAAATT 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         605 TEATACCHITTALGAATECHTIGGACHTGTAACATCTAAHGGACHTCCAGAGGHIGAAA 664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    725 TELEPGATCAGATAAAACHGFFCAGACTGAFTCTATAGAGAGTFFFFGAAACAGAGAA 784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 186 TOTALTGLEGASTOTTGASCAATT - GGAAAGGAZATGIGAACTTATATTTGAZAZ 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   103 TGTATTGTTTGGACTCTTGAGGAAATTGGGAAAGGACACGTGAACTTATATATTGACAC 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   245 AAPPORAGRADI FORBINATORAAATAAAATTORGCATTGGTGFTAAAAGTTTGTTGGA 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    405 TCACATTTTTATTAGCTAAAAGGGAAAGTATTACAAATGGAAGATGATGTGGTGATTTCAT 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        545 HETELGI AAAGAACATGAATGTAATATAGATGGTGAAAAARGTTGTTTATTTGAAAAATTF 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             665 AFCTTECTAAACGATAGGAAAATTTATETTAAAATAAAGATETAGATGGAAGATTAT 724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              643 TTTTGGATGALGATAAAACTGTTGAAACTGGATGTATAGAQAGTTTTGAAAQAGAGAA 702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              **March 24.1%; Score 786; DB 13; Longth 1001; Local Similarity 95.1%; Pred. No. 3.6e-141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                    Plate: LLAM12326 row. 1 column. 64
                                                                                                                                                                                                                        /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                          Zelone: "IMAGE:5575683"
Zelone: Tib: "NIH_MGC_92"
                                                                                                                         High quality sequence start: 17
High quality sequence stop: 734.
                                                                                                                                                                                                                                                  /db xret-"taxon:9606"
                                                                                                                                                                           Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 833; Conservative
                                                                                                                                                                                                .1001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sucry Match
                                                                                                                                                                                                        SCHION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RASE COUNT
                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NISIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>-</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           تِ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
```

```
Kawai,J., Shinaqawa,A., Shihata,K., Yoshino,M., Itoh,M., Ishii,Y., Arakawa,T., Hara,A., Fukunish,Y., Konno,H., Adachi,J., Fukuda,S., Aizawa,K., Itawa,M., Nishi,K., Kiyosawa,H., Kento,S., Yamanaka,I., Saito,T., Okazaki,Y., Gojobori,J., Hono,H., Kasukawa,I., Saito,R., Kadota,K., Matsuda,H., Ashburner,M., Batalov,S., Casavant,T., Fleischmann,W., Gaasterland,T., Gissi,C., Kinq,B., Kochiwa,H., Kuehl,P., Lewis,S., Matsuo,Y., Nikaido,I., Pesole,G., Yochiwa,H., Quackenbush,J., Schriml,L.M., Staubli,F., Suzuki,R., Tomita,M., Wagner,L., Washio,T., Sakai,K., Okido,T., Futuno,M., Aono,H., Baldarcili,K., Barsh,G., Blake,J., Roffelli,D., Hojunqu,N., Carninci,P., de Bonaldo,M.F., Brownstein,M.J., Bull,C., Fleitcher,C., Fujita,M., Gariboldi,M., Guslincich,S., Hill,D., Moyans,M., Hame,D.A., Kamiya,M., Lee,N.H., Lyons,P., Hill,D., Moyans,M., Hame,D.A., Kamiya,M., Lee,N.H., Lyons,P., Hill,D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K.,
Ltoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Normalization and subtraction of cap trapper selected toNAs to
prepare full-length cDNA libraries for rapid discovery of new genes
Conomic Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Shibata,K., Itoh,M., Aizawa,K., Naqaoka,S., Sasaki,N., Carninci,P., Konno,H., Akiyama,J., Nishi,K., Kitsunai,T., Tashiro,H., Itoh,M., Sumi,N., Ishii,Y., Nakamura,S., Hazama,M., Nishinori, Harada,A., Yamamoto,R., Matsumoto,H., Sakaquchi,S., Ikeqami,I., Kashiwaqi,K., Fujiwako,S., Inoue,K., Todawa,Y., Tawa,M., Uhara,B., Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., TanaPa,T., Matsura,S., Rawai,J., Ckazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayashizaki,Y. Rika integrated sequence analysis (RISA) system: 84-tormat sequencing pipeline with 84-multicapillary sequencer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Marchionni,L., Mashima,J., Mazzarelli,J., Mombaerts,P., Nordone,P.,
Ring,B., Ringwald,M., Rodriquez,L., Sakamoto,N., Sasaki,H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mammalia, Butheria, Rodentia, Sciuroquathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AK011246 110 days embryo whole body cina, RIKEN full-length enriched library, clone;2600017M22;retinoblastoma 1, full insert
                                                                                                                                                                                                          905 CTTCAGAAATCTGATTI -CCTATTTTAACAACTGCACAGTGAATCTAAAAAAAAATATT 962
                                                                                                                                   763 GGATGIIAIGANTATIAICGANTAATIAAIGAHIFIAAAH FAAAH FAAATAAR B22
                                                                                                                                                                                                                                                                      823 CITCAAAAATCCGAITITCCIAITTTAACAACTGCACGTGGAATCCCAAAAAGAAAGC 8H2
703 CACCACGAAAAAGITAACCITGAIGAAGACGIGGAAIGIAAFGCICCACACACACACCAGITA 76.2
                                                                       Mus musculus (strain:0578L/6J) 10 days embryo ebna to mkna,
elone_lib:RIKEN full:length enriched mouse ebna library
                                                                                                                                                                                                                                              High-efficiency tull-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
                                                                                                                                                                                                                                                                                                                                          963 ACTGAAAAGAGTGAAGGATATAGGATACATCTTTAA 998
                                                                                                                                                                                                                                                                                                                                                                                                      883 TATACCCGAAAACAAGCCIAAGGAATATAGGAATAA 918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1364 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Carninci, P. and Bayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AK011246
AK011246.1 GI:12847243
HTC: CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            clone:2600017M22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99279253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20530914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOHRNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDI, I NE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOHRNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 6
AK011246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1,00018
                                                                          ŝ
                                                                                                                                       ä
                                                                                                                                                                                                                                                                      a
```

```
Adachiet, Alawark, Abahitass, Abimura, I., Aub. H., Ardi, A.,
Arakawa, T., Baldarelli, P., Bono, H., Brownstein, M., Bult, C.,
Arakawa, T., Baldarelli, P., Bono, H., Brownstein, M., Bult, C.,
Carninel, P., Fukuda, S., Fukunishi, Y., Purubo, M., Hanagaki, T.,
Hara, A., Hayatsu, N., Hill, D., Hiramoto, Y., Hiraoka, T., Hori, F.,
Hume, D., Imotani, K., Ishi, Y., Iroh, M., Isawa, M., Kaya, S.,
Kurihara, C., Matsuyama, T., Miyazaki, A., Nishi, K., Nomura, K.,
Numazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Quackenbush, J.,
Saito, H., Saite, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D.,
Softrimi, L., Shibata, K., Shibata, Y., Shibata, A., Shiraki, T.,
Sogabe, Y., Sizuki, H., Tagami, M., Tagawa, A., Takahashi, P.,
Tanaka, T., Tejima, Y., Toya, T., Yamamura, T., Yamanaka, I.,
Yasupishi, A., Yoshida, K., Voshino, M., Muramalsu, M., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EIEEPEFIALCQKIKVPDHVRERAWLTWEKVSSVDGILEGYIQKKKELWGICIFIAAV
OLDEMPFTFTELQKSIETSVYKFFDLIKEIDTSTKVDNAMSFLLKKYNVI/7ALYSKIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RTCELIYLTQPSSALSTEINSMLVLKISWITFLLAKGEVLQMEDDLVISFOLMLCVVD
YFIKESPPALLREPYKTAALPINGSPRTPRRGQNRSARIAKOLENDTRI IEVLCKEHE
CNIDEVKNVYFKNFIPFINSLGIVSSNGLPEVESLSKRYEEVYIKNKDLDARLFLDHD
Schenkach, C., Sega, T., Shibata, Y., Sturch, E.F., Suruki, H., K., Wang, K.H., Woltz, C., Whittaker, C., Wilming, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /franslation-"MppKApPPAAAAPppppppppppppAgnScpFEIPLAPIPFP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    close_lib "RIKEN full length enriched mouse obwA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yokohama.
                                           Toyoroka.K., Wang,K.H., Weitz,C., Whittaker,C., Wilming,L.,
Wynshaw-Boris,A., Yoshida,K., Hasegawa,Y., Kawaji,H., Kohisuki,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Exploration Research Group, RIKEN Gemomic Sciences Center (GSC), PIKEN Yokchama Institute; 1-7-22 Suchiro-cho. Tsurumi ku. Yokohar Kanadawa 230-0045, Japan (E-mail:genome-reseasc.riken.go.)p. UNICHITED. Telm. 1801 (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 1801) (E.M. 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Engagers, (FIKFY), Takerstory for Genum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Please visit our web site (http://genome-gsc riken go jp/) for
                                                                                                                                                  and Hayashizaki,Y.
Functional annotation of a full-length mouse cDNA collection
Nature 409 (6821), 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Section MCD, Scotton boy MG: 97874.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /střain "C5781/6J"
3) xv.f "PANICM DB 2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /dev_stage-"10 days embryo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xre1-"MGD:MGI:1905260"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /protein_id="BAB27493.1"
/db xret "01.12847244"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db xref-"MGD:MGI:97874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xre1-"taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /close."2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    evidence: ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "ofoton
                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 1364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /qene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                putative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOLR.
                                                                                                                                                                                                                                                                                                                                                          11217851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOUTH
                                                                                                                                                                                                                                                                                                                                                          PUHMED
                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELE
Jediknal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dence
                                                                                                                                                                                                                                                              I WILLIAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             :
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENI
```

```
KTLÖTTET TESFELLEKTFRENNPRELARVVTTHTPVRTVMNTTGOLMVITASSBORNSE
NLISYFNNCTVNP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1084 TCTAAACGCTATGAAGAAGTTTATCTTAAAAACAAAGATTTAGATGCAAGACTTTTG 1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1024 CCTTTTATAAATTCACTTGGAATTGTATCATCTAATGGACTTCCAGAGGTTGAAAGTCTT 1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                544 ATCGATACCAGTACCAAGGTTGATAATGCTATGTGAAGAGTATTGAAGAAGTATAATGTG 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               376 FTAATGYTAIGTGTGGTIGAGTAITTIATTAAAGTGTGAGGTGGGGATGTGGTGAAAAAA 429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      784 PHARTHSTSTSTSTSTASTTSAPPPPARTANDERS BASTON PARTHOUGHSAPPASAGASA 943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HILLEHTELLE HELLEHTE FELLEN FELLEN HELLEHTELLEHTELLE HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       490 AACAGGACGGGGTAGCAAAAGAACTAGAAAATGATACAAGAATTALIGAAGTICIC 549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    550 INTABANAANATHAATHTATATATATATATAAAAGIGAAAAAIGTITATITCAAAAATITTAIA 609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                670 ICTABARGATATAGAAGAAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTATTTTG 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     730 GATCATGATAAAAACTCTTCAGACTGATTCTATAGACAGITTTGAAGACACAGAGAACACA 789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           790 CGAAAAAGIFAACCTFGATGAAGAGGTGAATGTAAFTCCTCCACACACACACTGAGTTAGGACT 849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         850 GITATGAAÇAÇTATÇÇAAÇAALIAAİĞALGALITLAAALICAGCAAĞTGATCAAĞCITCA 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              130 ATTENDADAG TAGA BANG TAGA TAGA TAGA GAGA GAGA GAGA GAGA TAGA T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               250 AGPAGITGGATAFGTAGAAATAAATTGTAGTTGGTGGTAAAAGTTFGTTGGAGA 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             310 TITITATTAGGTAAAGGGAAGTATTAGAAAGGGAAGAGGIGAIGTGGGGGATTTGAITTGAG 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 430 CCATATAAAACAGCIGTTATACAFIAA IGGI INANCIIGGAACACGGGGAGGICAG 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10 CLGIGGGGGAAAICICIAIALCIITATIGEAGCAGIIGACCIAGAIGAGAIGICGIICACIIII 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190 FIGHTGPACTGTFOAGAAAFIGGAAAGGAGAGIGAGAGITATATATTTGACAAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .;
O
                                                                                                                                                                                                                                                                                                                                                                   Score 777.8, DB 11; Length 1364;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches 102; Indels
                                                                                                                                          1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1324 GAAAATCTGATTTCCTACTTCAATAALTGCACAGTGAATCC 1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      910 GAAAAICIGAITIGGIAIITIAACAACIGCACAGIGAATCC 950
                                                                                                                                                                                                                                                                                                                                                                                                                                                Picd. No. 1.3e-139,
                                                                                                                                                  346 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        307 q
                                                                                                                                                                                                                                                                                                                                                           23.8%,
                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity 89.2%,
                                                                                                                                          306 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 839; Conservative
                                                                                                                                                  404 a
                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                Rest Local
                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        골
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ΩΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 김
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ωŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     â
```

```
of three ovaries, from females ranging in age from 88 to 49 yo. Library is oligo-di primed and directionally cloned 49 yo. Library is oligo-di primed and directionally cloned 50 keV site is destroyed upon cloning). Average insert size 2.1 kb, insert size range 1.5 kb. Library is contained and enriched for full-length clones and was constructed by controlled by containing a graph of the first ranging by containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first containing the first co
                                                                                  HM545881 RST 20-FEB 2002
ACHNO OFFLE 505184 NIH_MGC_125 Homo sapiens cona clone IMACE:5588245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zhote-"organ: ovary (pool ol 4); Vertor: pCMV-SPORT6;
Site_1: EroKV (destroyed); Site_2: Noll; RNA source pool
                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryola, Metazoa: Chordata: Craniata: Vertebrata; Euteleostomi;
Mammalia: Eutheria: Primates: Catarrhini; Hominidae; Homo.
1 (bases 1 to 1122)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2231 FPOSSGALTEST GAGAACT FCCAGAAATAAATGAGATGTAAGAGCGACCGTGTG 2292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24.1.3 CAGAAACHGGAGAAALGACHFHACHCGAAGAAAHGCAAAAAGGAAAAHGAHGAT 2472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2473 ARYATOSATACHTAAACAAQGAAQGAAAGAGGALCTGAGGACCTTGGTGGACACTTTT 2532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2.45.4. ATTGANGGATCAGATGANGCAGATGAAAGTAAACATCTCCCAGGAGGTCCAAATTTCAG_2412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2534 GTACACCTCTGGATTGATTGTCTCTCTGAGAGTGTGACTGTATAACTTTGCGAGGTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cbNA Library Preparation: Life Technologies, Inc., cbNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) bNA Sequencing by: Agencourt Bioscience Corporation componed through a distribution: MSC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NIH MGP bttp://mgc.nci.nth.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240 ITGTAGACTTCTGAGAAGTTCCAGAAAATAAATCAGATGGTATGTAACAGGGACCGTGTG 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32: Indels 6: Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 13; Length 1122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 others
                                                                              HENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 95,6%; Pred. No. 1e 134;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             359 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plate: LLAM12359 row: a column: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /ordanism="Homo_sapiens"
/db_xret="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zelone lib-"NIH_MGC_125"
Zlab_host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence start: 48
High quality sequence stop: 773.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zelone-"IMAGE:5588245"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: cqapbs ramail.nih.gov
Tissue Procurement: Invitrogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             216 9
                                                                                                                                                                                                                                                        BM545881.1 GI:18778365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.82
                                                                                                                                                                     , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 827; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .1122
                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #() d
                                                                                                                                                                                                               BM545881
                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                           183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SCHILCE
                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                  CRCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HASE COUNT
                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
RESULT 7
RMS45881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOINNAL.
                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1111.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LAMME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N DIN
                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                       50,00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
```

```
Extra 14-AUG-2001

BKT2F413-0816_r1 413 (synchys. http://loncomplete.com.com.com.

BKT2F430816_5', mknA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Poustka,A., Wellenreuther,R., Mewes,H.W., Weil.B. and Wiemann.S.).
EST (Poustka,A., Wellenreuther,R., Mewes,H.W., Weil.B. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Heidelberg/Germany) within the CDNA sequencing consortium of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No sl seguence available.
This clone (DKFZp31300B16) is available at the KZFD in Berlin.
Please contact the RZFD. Ressour cuzentium, Henhnerweq 6, 14059
                                                                                                                                                                                                                                                         252
                                                                                                                                                                                                                                                                                                                                              2273 AATTOCTGTOCTTFALGGAFAGTAAGAALKOOCHAGAGTGGGAGTCTTGALAACERAD 2832
                                                                                                                                                                                                                                                                                                                                                                                                                                              7687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2950 TCTATCTTCCAAATGCAALTTGATTGATTGACTGCCATTCACCAAATLALCCTGAACLCTTC 3009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3010 TGCAAAAAT-GGATATTATTAGAAATTAGAAAAAAAAATTACTAATTTTACACATTAGATTT 3068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKFZ); Email s.wiemann@dktz_heidelberg.de;
sequenced by DKFZ (German Cancer Research Center,
                                                                                                                                                          2653 GTTIGGGIGATICCIAAGCCACTIGAAAIGITAGICATIGITATITATACAAGAITGAAA 2712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2893 TAATITATA--IGTATATITITITAATITAAAAGAA-GAGGTIAGAAAAAGGGGTA 2949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            959 TCTATCTTCCAAATGCAATTTGATTGACTGCCCATTCACC AAATTATCCTGAACTCTTC 1017
                                                                                                                                                                                                        719
                                                                                                                                                                                                                                                                          780 AATTGCTGTGCTTTATGGATAGTAAGAATGGCCCTAGAGTGGGGAGTGTTGATAAGCGAGG 839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600 ITAIGGCCACAITIAAIAITCIICAGCICTITIIGIGGAIAIAAAA;GGGCACAGAGAAAT
                                                                                                                                                                                    2593 TITATGOCCACATITAATATGITTCACCTCTTTCCCGAATACAAAALGGATA AATGCAATT
                                                                                                                                                                                                                                                    2713 ATCTIOTGTANATGGTANTITAAAAASTTGIAGGAGATGTTGGTGTGTGTGAAAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                         2833 CCTGTCTGACTACTTTGCCTTCTTTGTAGCATATAGGTGATGTTTGCTCTTGTTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 727)
Department Lehrach
Max-Planck-Institute for Molecular Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence of the clone insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fax: +49-30-84131128
Email: poustka@mpimg-berlin-dahlem.mpq.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ibnestrasse 73, 14195 Berlin, Germany
Tel: +49-30-84131623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3069 TATTTTACTATTGGAATCTGATATA 3094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1078 TATITIACIATIGAAAAAGGGAATA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AL597811.1 G1:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Poustka A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     German Genome Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This is the 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        пытап.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OPGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á.
                                                                                                           급
                                                                                                                                                            ŝ
                                                                                                                                                                                                        <u>a</u>
                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                ď
                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
```

```
0;
                                                                                                                                                                                                                                                                                                                                                                                                        Znote "Vector: pTriplEx2, Site_1, SfilA; Site_2: SfilB; cDNA-collection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1884 AATCALIGIAACAGCATAAAGAATGATGTTGTTGTTGTTGTTGAGGAGAGATATTCAAAGGTGT 1943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1944 TTTGATCAAAGAAGAGACTATTATGATTATTATAGTATTCTATAACTGGGTCTTCATGA 2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Z 3 U.4 - 1 COLO LA DA CARACTERITO PARACTER DA DA PARA DE LA CONTRESENTA DE CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA CONTRE DA 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1544 GAAATGIAGGICITITGAFGTITIATAAAAAGGIATATGGGFTAGCGIATGTGGGGGT 1703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1794 AAATACATTIIGIGAACGCCTICIGIGAGCACCCAGAATTAGAACAFAICALCFGGAC 1763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1764 CCTTTTCCAGCACACCCTGCAGAATGAGTATGAAGTCATGAGAGACAGGCATTTGGACCA 1823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1824 AATTATGATGTGTTCCATGTATGGCATATGCAAAGTGAAGAATATAGACGTTAAATTGAA 1883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2054 ACCICACATTCCTCGAAGGGGTTTACAAGTTTTGCTAAGTTTAGGGATTTGGTGGATTTGGTGGAGG 2123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2124 GAACAICIAFATTTCACCCCFGAAGAGTCCATATAAAATTTCAGAAGGTCTGCCAACACC 2183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2184 AACAAAAAIGACTCCAAGATCAAAAATCTIASTATCAATIGGTGAATCAITCGGGACTTC 2243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             351 GAGACTGAAAACAAA FATTTTGCAGTATGCTTCCACCAGGCCCCCTACCTTGTCACAAT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14.1 AACAAAAATGACPCCAAGAPCAAGAAPCPPAGTAPCAAPPGGTGAAPCAPPCGGGACPPC 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22.2%; Score 725.4; DB 9, Length 727.
99.9%; Pred. No. 1.6e-129,
Berlin Charlottenburg GERMANY: Email: clonestrypd de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                         /clone-"DKFZp31300816"
/clone_lib "313 (synonym: hlcc2)"
/dev_stage "adult"
/lab bost-"pw10#"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        198 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                                            /organism="Homo sapions"
/db_xrof="taxon:9606"
                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        130 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        161 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2464 AGAIGAA 2370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721 AGAIGAA 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 726;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unerry Matel
                                                                                               Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MASE DOINT
                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ġ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
```

RESULT 9 BQ222227

```
F2222227
AGENCOURT_7566045 NIH_MGC_92 Homo sapiens cDNA clone IMAGE:6041563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="Organ: testis; Vector: pcMV-SPORT6; Site_1: Not1; Site_2: Sall; Cloned unidirectionally, oligo dT primed. Average insert size 2.5 kb. Library enriched for full-length closes and home: the is a NIH_MGC Library."

Note: this is a NIH_MGC Library."
                                                                                                                                                                                      Eukaryola, Motazou, Chordata, Chanjata, Vertebraha, Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                     CDNA Library Preparation: Life Technologies, Inc., CDNA Library Arrayed by: The I.M.A.G.E. Consortion (LINE) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MCC clone distribution information can be found through the I.M.A.G.E. Consortium/LiNI at: http://image.llnl.gov
                                                                                                                                                                                                                                1 (bases 1 to 880)
NIH MGC http.//mac.nci.nih.qov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           247 COCAGCASTICGATATOTACAAATAAATTOTACATGGGGGGTAAAAGTITGTIGGATC 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 CCCAGCACTTCCATATCTACTGAAATAAATTCTGCATTCGTGCTAAAAGTTTTCTTGGATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   367 CACTTAATGCTATGTCCTTGACTATTTATTAAACTCTCACCTCCCATGTTGCTCAAA 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            427 GAACCATATAAAACAGGIGIIAIACGCAIIAAIGGIICACGIGGAACACGCAAGGGAAGA 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        487 CAGAACAGGATGCAGGGATAGTAGTAATAATAATAAATGAAATGATATATTGAAGTT 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               547 CTCTGTAAAGAACATGAATGTAATATAGATGAAGAAATGTTTATTTGAAAAATTT 606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361 CTCTGTAAAGAACATGAATGTAATATAGATGAGATGAAAAATGTTTAITTGAAAAATTTT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241 GAACCAFAFAAAACAGCFGTTATACCCATTAAFGGTTCACCTCGAACACCCAGGGGAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22.1%; Score 720.6; DB 14, Length 880; 98.7%; Pred. No. 1.4e-128; Live 0, Mismatches 9; Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type-"embryonal carcinoma, cell line"
/lab_host-"DH10R (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Plate: LLAM13279 row: i column: 20
                                                                                                                                                                                                                                                                                                                               Contact, πobelt Strausberg, Ph.D.
Email, egapbs-t-Amail.nih.gov
Tissue Procurement: AFCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism "Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib="NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:9606"
/clone="IMAGE:6041563"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High quality sequence stop:
                                                                                       К<u>Ф</u>222227.1 Ст.20403627
                                                                                                                                                                                                                                                                                                                Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 98.79
Matches 737; Conservative
                                               , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 880
                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             321 a
                                                                                                                                                human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                      DEFINITION
                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                   ACCESSION
                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
```

ORIGIN

```
EST 18-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Enkaryota; Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            602611848F1 NIH_MGC_60 Homo sapiens cDNA clone IMAGE:4737634 57,
                                   421 ATACCITITATGAATTCICITIGGACITGIAACAICIAATGGACITCCAGAGGITGAAAAT 480
                                                                                          541 TTGGATCATGATAAAACTCTTCAGACTGATTCTATAGACAGTTTTGAAACACAGAAGA 500
                                                                                                                                                                                                                       787 COACGAAAAAGTAACCTTGATGAAGAGGTGAATGTAATTGCTGGAGAGAGTCGAGTTAGG 846
                                                                                                                                                                                                                                         607 ATACCH FFFATGAAFFCFCFFGGACFFGFAAGAFGGAGFFGCAGAGGFFGAAAAF 666
                                                                      667 CTITCTAAACGATACGAAGAAATTATCTTAAAATAAAAGATCTAGATGCAAGATTATTT 725
                                                                                                                                                 727 TEGGATCATGATAAAACTCTTCAGACTGATTCTATAGACAGTTTTGAAACACAGAGACA 786
                                                                                                                                                                                                                                                                                                847 ACTGITATGAACACTATCCAACAATTAATGATTTTAAATTCAGCAAGTGATCAA-CC 905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 823)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc.
                 CONA Library Preparation: CLONETECH Laboratories, Inc.
                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            πRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       http://image.llnl.gov
Plate: LLCM1605 row: o column: 11
High quality sequence Stop: 709.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib-"NIH_MGC_60"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            823 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xret-"taxon:9606"
/elone-"IMAGE:4737634"
                                                                                                                                                                                                                                                                                                                                                                           906 TTCAGAAAATCTGATTTGCTATTTAA 932
                                                                                                                                                                                                                                                                                                                                                                                              721 TTCAAAAAATCTGATTTTGCTATTTA 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: egapbs-ramail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lissue Procurement: DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BG610661.1 GI:13662032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BG610661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BG61066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sollos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NOLLINITED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19901908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
 5
                                                                                                                                                 Š
                                                                                                                                                                                  Ē
                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                  5
                                                                          5
                                                                                                                                                                                                                         ?
                                                                                                                                                                                                                                                                                                                                                                         Š
```

271 t

142 q

262 2

```
linear EST 16 FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2754 CITITOCI CITICO AAADIAGIAAAATIGCI GIGGOTI ITATIGGATAGIAAGAATGGCCCI AGACIG 2813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AL563757 LTI_NFL001_NBC4 Homo sapiens cDNA clone CS0DD007YA05 3
                                                                   2394 AGGAGAGTCCAAATTTCAGCAGAAACTGGCAGAAATGACTTCTACTCGAAGAGGAATGCA 2453
                                                                                                                                       2454 AAAGCAGAAAATGAATGATAGCATGGATACCTCAAACAAGGAAGAAAATGAGAGATCTCA 2513
                                                                                                                                                                                                                                                                               2574 TAACTTTCCCAGGTTCTGTTTTATGCCCACATTTAATATCTTCAGCTCTTTTTGTGGATAT 2633
                                                                                                                                                                                                                                                                                                                                                      2634 AAAATGTGCAGATGCAATTGTTTGGGTGATTCCTAAGGGACTTGAAATGTTAGTCATTGT 2693
                                                                                                                                                                                                                                                                                                                                                                                                                           2694 TATTTATACAAGATTGAAAATCTTGTGTAAATCCTGCCAATTTAAAAAGTTCTAGCAGATT 2753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3111 AAAATTTTGGTTTTTAATTAAATAAAAGGTGGAAAGTATAACCALAEGALACTATGA 3170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2994 ITATCCTGAACTCTTCTGCAAAAATGGATATTATTAGAAATT---AGAAAAAAATTACTA 3050
                                                                                                                                                                                                                                 301 TATITATACAAGATIGAAAATCIIGIGTAAAATCCIGCCATITAAAAAGITGIAGCAGAIT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361 GITTCCTCTTCCAAAGTAAAATTGCTGTGCTTTATGGAATAGTAAGAATGGCCCTTAGAGTG 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601 TTATCCFGAACTCTTCTGCAAAATGGATATTATTGCGAAATGAGAAAAAAATAATTACTA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661 ATTITACACCAT-TAGATICAATTACTATIGGAATCIGATATACIGIGGIGGCTIG--TICA 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                718 TAAAATTTGGTTTAACTAACATACAAGCTGGAAGCAAAGTAT-AGGATATGATAGA 776
                                       9; Gaps
                                                                                                    1 AGGAGAGTCCAAATTTCAGCAGAAACTGGCAGAAATGACTTCTACTCGAACAACAAATGCA 60
                                                                                                                                                                                                            2514 GGACCTTGGTGGACACLGTSTACACCTCGGATTCATTGTCTCTCACACAGATGTGTGTA
                                                                                                                                                                                                                                                                                                                                                                         3814 GGAGTOTTGATAACCCAGGCCTGTCTGACTTTGCCTTCTTTTGTACCATATAGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21.4%; Score 699.6; DB-12; Length 823; 94.8%; Pred. No. 1.5e-124; tive 0, Mismatches 34; Indels 9;
                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3171 TACTA TOAAACAGATTTCATACCTCAGAATGTAAAAGAACT 3212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      m K N A
                                                                                                                                                                                                                                                                                                                                                                                                                                               792 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AL563757.1 GI:12913464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              prime, mkna sequence.
AL563757
                               779; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hollic sapiens
              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A1.563757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AL563757/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                    ٠
ن
                                                                                                    qd
                                                                                                                                                                         q
                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                        Q ::
                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Оp
                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ó
```

```
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plate: LLCM1568
                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA sequence.
BG570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 747,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                               BG570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     · FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>:</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     οÿ
                                                                7
                                                                                                        성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Technologies. Contact: Feng Library was constructed Technologies, a division of Invitroyen 5800 Medical Center Drive Rockville, Maryland 20850, USA Fax: (1) 301 610 http://fulllength.invitrogen.com.n. 148 c. 117 q. 255 1
                                                                                                                                                                                                                                                                                                                                                                                                  And E-Torgan Train, Ventur promySenFT is 1st strand of NA was primed with a NotFollyO(dT) primer. Five prime end enriched, double stranded cONA was digested with Not 1 and cloned into the Not I and Eco RV sites of the pCMVSPORT 6 ventur. Library was normalized Library was constructed.
Eukanyota, Metapoa, Chordata, Crantata, Vertebrata, Euteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         975 GAAGGATATAGGATACATCTTTAAAGAAAATTTGCTAAAAGCTGTGGGACAGGGTTGTGT 1034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        495 GAGTGCACGGATAGCAAAACAACTAGAAATGATAGAAGAATTATTGAAGTTGTGTAA 554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            732 GAGTGCACGGWTAGCAACACAAAATTGAATTGATAGAAATTGAAGTTGAGGTTCTGTATAA 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      555 AGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTGAAAAATTTTATACCTTT 614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      615 TATGAATTOTOTGGAAATGGTAATGGAGTTGCAGAGGTTGAAAATGTTTGTAA 674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   612 TATGAATTCPCTTGGACTTGTMACATCTWATGGAGACTTGCAGAGGTTGAAA/FYCTTTGTAA 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           675 ACGATACGAAGAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTATTTTGGATCA 734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   552 ACGATACGAAGAATTTTTCTTAAAATAAAGATCTAGATGCAAGATTATTTTGGWTCA 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             795 AAGTAACCTTGATGAAGAGGGAATHTAATTHHTGCANANACHONAHTAAHANCTGTTAT 854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        432 AAGTAACCTTGWIGGAGAGGIGAATGTAATTCCTCCACACACACGGTIAGGAYTGTTTT 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  855 GAACACTALCCAACATTAATGATGATTTTAAATTCAGGAAGTGATGAAGCTTGAAAAA 914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    915 FORGATIFICOTATIFITAACAACTICCACAGTGAATCCAAAAGAAAGTATACTGAAAAGAGT 974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              312 IYTGTTTLCYTWTTTTTACGACTGCACAGTGAATCCAAAAGAAAGTATACTGAAAAGACT 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3; Caps
                                                                                                                                                                                          Email: segref@genoscope.cns.fr, Web . www genescope cos fr
               Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 9, Langth 792;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23, Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Full-length cDNA libraries and normalization Unpublished (2001)
                                                              and Polayes, D.
                                                                                                                                                                                                                                                                                                                                                          /tissue_type-"neuroblastoma cells"
                                                                                                                                              Genoscope : Centre National de Sequencage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21.4%, Score 698.2, DB 9, 93.6%; Prod No. 2 8c-124, tive 23; Mismatches 23,
                                                                                                                                                                                                                                                                                                            /clone_lib-"LTI_NFL001_NBC4"
/sex-"male"
                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/db_xref="taxon.9606"
                                                                                                                                                                  BP 191 91006 EVRY cedex - France
                                                                                                                                                                                                                                                                                                 /clone-"CSODD007YA05"
                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                 /lab_host-"DH10B"
                                        (bases 1 to 792)
                                                                                                                            Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 722; Conservative
                                          1 (Ddases
Li,W.B., Gruber,C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Oucry Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    246 a
                                                                                                                                                                                                                                     SCHLOP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                       AUTHORS
                                                                                                    JOHNRAL
                                                                                                                                                                                                              FEATURES
                                                                                                                            MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
```

```
/clone_lib="NHH_MGC_77"
/lab_host="DHIOB (TI phage-resistant)"
/note="Corpus lung, Vector: pDNRTLHB (Clontech), Site_l:
/note="Corpus lung, Vector: pDNRTLHB (Clontech), Site_l:
Sit1 (ggcgccreggc), Site_l: Site_l:
3' adaptors were used in cloning as follows: 5' adaptor sequence: 5'-(ArangeAlTAPARATO-1' and 1' adaptor adaptor page adaptor processed in cloning as follows: 5' adaptor sequence: 5'-(ArangeAlTAPARATO-1') and 1' adaptor page adaptor processed in cloning as follows: 5'-(ArangeAlTAPARATO-1') and 1' adaptor page and processed in cloning as follows: 5'-(ArangeAlTAPARATO-1') and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page and 1' adaptor page 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PG570456 767 bp mRNA linear EST 10-APR-2001 502591312E1 NIH_MGC_77 Homo sapiens cDNA clone IMAGE:4717874 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5. ATTCTARAGGCCGACATG-dT(30)BN-3' (Where B - A. C. or G and N = A. C. G. or T). Average insert size 1.9 kb (range 0.5-4.0 kb) 12/15 colonies contained inserts by PCR. This library was enriched for full-length clones and was constructed by Clontech laboratories (Paio Alto, CA). Note: this is a NHLMGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Chaniata, Vertebrata, Euteleostomi; Mammalia, Eutheria; Frimates, Catarrhini, Hominidae, Homo. 1 (bases 1 to 767)
NTH Mnc http.//mgc.ncl.uih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2534 TACACCTCTGGATTCATTCTCTCTCA/AGATGTGATAGTATACTTTCCCAGGGGGGGT 2593
                                                                                                                                                                         1035 OGAAATTGGATCACAGCGATACAAACTIGG--AGFFGGCTFGTAFFAGCGAGTAAFGGAA 1092
                                                                                                                                                                                                                                                                                                                                                                                                                 1093 FOATGOTTAAATGAGAAGAAGAAGATGATGATGAAAATTTTAGGAAAGTTCTGAAT 1152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2474 GCATGGAFACCTCAAA/AA/AAAAAAAAAAGA/AA/AA/AA/TI/AG/AC/TF/AGGACACACTGTG 2533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA Library Preparation: CLONIECH Laboratories, Inc. cDNA Library Arrayed by: The I M A \theta F. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                192 CGAAATIGGAICACAGCGAIACAAACIIGGIITGIITCGCIIGIATIACCGAGTAATGGAA 133
                                                  252 GAAGGAIWIKGGAIACWIYITIAAAGAGAAAIIIGGIAAGAGGAGGGACAGGGIIGI 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21.2%; Score 692.2; DB 12; Length 767; 97.1%, Pred. No. 4e-123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   found through the I.M.A.G.F. Consortium/LLINI at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1999)
Contain Rebert Strausberg, th.L.
Contail: Cyapbs Tamal.clh.gov
Tissuc Procurement: CLONTECH Laboratories, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       row. h column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:4717874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop: 725.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BG570456.1 GI:13578109
```

= 5 = 5 = 7

-5 ŝ 3 ÷

Ê 5

```
BM466194 Inear EST 05-FEB-2002
AGENYOURE, 6456973 NIH_MGC_92 Home sapiens chwa cione IMAGE:5576939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa: Chordata; Craniata; Vertebrata, Euteleostomi;
Mammalla: Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                          2894 ANTITATALCHALATITITITIAATITAACATGAACACCTTAGAAAATGTGTGTGTA 2953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11.33 AAAAMTI GGAAGGAAAGTATAAGGATATGATATGATACTAGTAGGAAGAGAGATTTGATA 3192
                                                                                                                                                                                                                                                                                                                      2554 TITESGIGATICCIAAGCCACTIGAAATGTIAGTCATIGITAITATACAAAGAITGAAAA 2713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2714 TOLIGIGIAAAFOOLGOOALITIAAAAAGITGIAGGAGATTGITTGGTGTGGAAAGTAAA 2773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2774 - ATTGELGTGELTTATGGATAGTAAGAATGGGGTTAGAGTGGGAGTGGTGATAAGGGAGGG-2833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2834 CTGTCTGACTACITTGCCTTCTTTGTAGCATATAGGTGATGTTTGCTTTGTTTATT 2893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2954 TCTTCCAAATGCAATTIGALTGAGT-GCCCALICACAAAATTATCGIGAAGTGTTGCG 3012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            073 TTACTALIGGAALCIGALALACIGIGIGCITIGITTIALAAAATTTIGCTI FLAATTAAAT 3132
                                                                                                                                                                                                                                                                                                                                                                               HELLITHT HELLITHT HITTELLING TO A STREET HELLITHT HITTELLING TO A STREET TO A STREET A CARACTER A STREET A CARACTER A STREET A CARACTER A STREET A CARACTER A STREET A CARACTER A STREET A CARACTER A STREET A CARACTER A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A STREET A S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481 PCTTCCAAATGCAATTGGATTGACTGGCCCATTCACCAAAATTATCCTGAACTCTCTGC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA Library Arrayed by: The LLM.6.E. Consortium (LLNL.)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MAG clone distribution information can be
print through the LLM.A.G.E. Consortium/LLNL at:
http://mage.llm.aov
61 TACACCTCTGGATTCALIGTCTCTCTCAAAAAGGGAGGAAAAGTTCCCAGGTTCTGTT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601 TTACTATGGGAATCTGATATACTGTGTTGTTTATAAAA-TTTGGTTTAATTAAATT 659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660 AAAAGGGGAAAG AAGTATAAGGATAGTATTAATGAAAGAATTTGATA 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3193 CCTCAGAATGT AAAAGAACTTACTGATTATTTTTTTCATCCAACTTAT 3240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            719 CCLCAGAATGTGTAAAGAACTTACTGCTACTTCTTCATCAAATTAT 767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONA Library Preparation: Life Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1999)
Contact: Robert Strausborg, Ph.D.

    (bases 1 to 972)
    NIH-MGT http://www.nri-nih-qozz.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: eqapbs ramail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                         BM466194.1 GI:18515236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        , mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BM466194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NEFINITON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PESULT 13
BM465194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 I NOWE .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUBSCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. × 11.8
                                                                                                                                                                                                           â
                                                                                                     5
```

â $\stackrel{\times}{\circ}$ ŝ

5

```
/note-"ordan testis: Vector: pMW Speki; Site 1: Noil:
Site_2: Sall; Cloned unidirectionally: oligo-di primed.
Average insert size_2.5 kb. Library enriched for
Inl. length closes and constructed by Lite Technologies.
Note: this is a NIH_MGC_Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                               2470 GATAGCATGGATACCTCAAACAAGGAAGAAATGAGGATCTCAGGACTTGGTGGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2530 TGTGTACACCTCTGGATTCATTGTCTCACACATGTGACTGTATAACTTTCCCAGGTTC 2589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2590 TGTTTATGGGCACATTTAATATCTTCAGGTGTTTTTGTGGATATAAAATGTGCAGATGGA 2649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2830 AGGCCTGTCTGACTACTTTGCCTTCTTTGTAGCATATAGGTGATGTTTGCTCTTGTTT 2889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2890 TATTAATTTATATGTATGTTTTTTTAATTTTAACATGAACACGCTTAGAAAATGTGTGCCTA 2949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8070 ATTITACIATIGGAATCIGAJAIACTGIG-----IGCITGITITAIAAAATTITGCITIT 4124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2650 ATTGTTTGGGTGATTCCTAAGGCAGTTGAAATGTTAGTGATTGTTATTATATAGAGATTG 2709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2770 TAAAATIGGTGTGCTTTALGGALAGIAAGAALGGGGCTAGAGGGGGAGLCCTGALAACC 2829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2950 TCTATCTTCCAAATGCAATTTGATTGACTGCCATTCACCAAAATTAFCCFGAAAFTC 3009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8010 TGCAAAAATGGATATTATTAGAAATTAGAAAAAAATTAGTAATTTTACACATTAGATTTT +069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 TGTGTACACCTCTGGATTCATTGTCTCACAGATGTGACTGTATAACTTTCCCAGGTTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661 ATTTFACTATTGGAATCTGATATACTGGGGGCTTGGTTTTATAAAAAATTTTGCCTTTTA 720
                                                                                                                                                                                                                                                                                                                                                                                                            6; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 CATCACAAAACTGGCAGAAATGACTTCTACTCGAACACGAAATGGAAAAAGGAGAAAATGAAT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601 TGCAAAAATGGATATTAFTANAAATTAGAAAAAATTACTAAFTTTAGAGTTTT
                                                                                                                                                                                                                                                                                                                                                                 DB 14; Length 972;
                                                                             /db_xrct="raxon:9606"
/clone="IMAGE:5576949"
/clone=lib="NIH.MGC_9606"
/clone=lib="NIH.MGC_9606"
/lashertype="embryonal carcinoma, cvil line"
/lab_bost="DHIOH (phage-resistant)"
                                                                                                                                                                                                                                                                                                        2 others
                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                              6
                                                                                                                                                                                                                                                                                                                                                               Query Match 21.2%; Score 691.8; DB-14.
Best Local Similarity 96.7%; Pred. No. 4.7e-123;
                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3125 AATTAAATAAAGCT-GGAAGCAAAGTATAACC 3156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721 ATTAAGATAAAAGCTGGGAAGCAAAGTATAACC 753
                                                              /ordanism-"Homo sapiens"
High quality sequence stop: 621.
Location/Qualitiers
1. .972
                                                                                                                                                                                                                                                                                                     169 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               184 C
                                                                                                                                                                                                                                                                                                                                                                                                         Matches 728; Conservative
                                              Source
                                                                                                                                                                                                                                                                                                 BASE COUNT
                      FEATURES
                                                                                                                                                                                                                                                                                                                         CRICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q_{cl}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
```

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YILLE
THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                       Ś.
                                                                                                                                                                                                                                   ĝ
                                                                                                                                                                                                                                                                                                                   q
                                                              검
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ó
                                        EST 05-FEB-2002
                                     BM453724 BMC 835 bp mRNA linear EST 05-FEB-2003
AGENCYTET_6402743 NIH_M3C_72 Homo sapiens cDNA clone IMAGE.5528814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone="INGGE:5528814"
/clone lib="NIH_MGC_72"
/tissue="medanolic mclanoma"
/tissue="medanolic mclanoma"
/tab host="NHON (page-rosistant)"
/ab host="NHON (page-rosistant)"
/actr "cran akin Vertor pawy Spopy6; Site_1: Nett;
Site_2: Sall; Cloned unidirectionally. Brimer olige dr
                                                                                                                                                                                      Home suplens
Lubrayors, Morazos, Cherdata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Primates, Catarrhini, Hominidae, Home.
1 (bases 1 to 835)
Half-Moc http://mac.nci.nih.aov/.
National Institutes of Health, Mammallan Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Library Sonstructed by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.71 ACCATOTHAACATGGAATGATGGAATGCGTTGCATGGCTCTCAGATTCACTTTATTTGA 1430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1741 IGAGCACHCAGAATTAGAAGATATCATGTGGACHTTTTGCAGGACACCGGCGGAATGA 1790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14.81 TCTTATTAAACAATCAAAGGACCGAAGGAACGAACAAACTGATGAGGTGTGAATGTGG 1490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        149] ICTIFATOTICCICCCAGAATAATOAOHGGAGATATGTATGTATGTGTTTTGTGTAAG 1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1671 TAAAAAGIGTATGGGCTAGGCTATGTGGGCTAAATAGAGTTGTGAAAGGCCTTGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          193 ATCTCCAAAAAAAAAAAAAAAAAAAGTTAAAGTAAAATTCTAATGGAAAGTGGAGAGA 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Saps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA Library Preparation. Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL) DNA Sequencing by: Agencourt Bloscience Corporation Cone distribution. MGC Flower distribution information confound through the I.M.A.G.E. Consortium/ILINL at: http://frace.ir/library.org/processing/income column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20 8%; Soore 67%; DR 13; Tength 835;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1980.0%; Pred. No. Jude 120,
the 0, Mismatches 0, Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                137 q 233 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Average insert size 2 kb
                                                                                                                                                                                                                                                                                                                                                                               Tissue Procurement: AICC/DCTD/DTP
                                                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Ph.D. Email: cgapbs (Pmail: cjapov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism-"Homo sapiens"
/db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High quality sequence stop: 647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualitiers
                                                                                                                        BM453724.1 GI:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Technologies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                210 c
                                                                              5', mKNA sequence.
BM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 198.6
Matches 678, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8.35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  254 a
                                                                                                                                                                    human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unery Mateh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOUTH
                                                            NOTLINITED
                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RASE CONT
                                                                                                                                            KEYWARDS
SOURTE
                                                                                                    A. Y. C. E. S. S. L. D. A.
                                                                                                                                                                                                                                                                           AUTHORS
KEFEKEN, E
                                                                                                                                                                                                                                                                                                                 TOURNAL
               BM45 47.24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                          VERSTAN
                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                       I N I WW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NICE NO
                                   LOCHE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     =
```

```
linear 181 11 (871 2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryola; Metazoa: Chordata; Craniata; Vertebrata; Eutlelecstomi; Mammalia; Eutheria: Primetes: Catarrhini; Hominidae; Homo. 1 (bases to 622) NH-MO. http://mgc.nct.nth.gcm/. NH-MO. http://mgc.nct.nth.gcm/. National Institutes of Health, Mammalian Gene Collection (MGT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note-"Organ: liver, Vector: pCNV'SPORT6; Site_1: Not1; Site_2: Sall; Cloned unidirectionally; olido-dF primed. Average insert Size 1.7 kb. Library enriched for full:length: cleres and constructed by Life Technologies. Note: this is a NHEMGC Library."
                                                                                                                                                                                                                                                                     1911 TUCTUATGUIGITUAGGAGAATAITUAAAGGIGITITGAICAAAGAAGAGAGIAIGAITU 1970
                                                     1791 GTATGAACTCATGAGAGACAATTTGGACCAAATTATGATGTGTTCCATGTATGATGATGTTCATGAGGGAT 1850
                                                                                                                                                             1851 AFGCAAAGFGAAGAATAFAGACCTTAAAFFCAAAATCATTGFAACAGCAFACAAGGAFGF 1910
                                                                                                                                                                                                                                                                                                                                                                          1971 TATTATASTATTSTAACTSSGTSTTSATSSAGASASAAAAAAAATATTTSSASTA 2030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         672 bp mRNA linear ESF 11 (87) 603392330F1 NIH_MGC_90 Homo sapiens cDNA clone IMAGE:5402622 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2132 ATATTTCACCCCTGAAGAGTCCATATAAAATTTCAGAAGGTCTGGCAACAACAACAAAAA 2191
                                                                                                                                                                                         cDNA Library Preparation. Life Technologies, Inc. cDNA Library Arrayed by. The T M A G F. Consortium (LLML) LNA Sequencing by They I consortium (LLML) Thous distribution. NGC clone distribution inturmation can be found through the T.M.A.G.E. Consortium/LLNL at: http://mag.lll.gov.rcw.k.column: 07
                                                                              553 POPENATORING PRAGGAGAGA PENAAGGIGITITIGA POAAGAAGAGGAGTATGATTC 612
                                                                                                                                                                                                                                                                                                                                                                                                   373 YGAGGAGGAGAATTAGAACATATCATCTGGACCTIIIICCAGGACACCCTGCAGAAIGA 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels 1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20 2%; Srore 660; DR 13; length 672; 99.9%; Pred. No. 6.3e-117;
                                                                                                                                                                                                                                                                                                 /Lissue_type-"adenocarcinoma, cell line"
/lab_host-"DH10R (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     186 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism-"Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:5402622"
/clone_lib="NIH_MGC_90"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop: 668.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: cgapbs-remail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     134 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              H1868359.1 GI:16042032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2031 FOOTFOCACCAGGGGGG 2048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       673 IGUTICUACCAGGCCCC 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     124 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 671; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E 877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B1868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 doMaddaddd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHURS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOTTENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ВТВБВЗ59
```

· -• ·

> Search, completed; January 18, 2033, 04:07:55 Job Line : 2893-96 secs

			÷
		,	

Cupyright (c) 1993 - 2003 Compugen Ltd.

```
(Without alignments)
7320,587 Million cell updates/sec
                                      January 17, 2003, 18:27:24 ; Search time 1926,93 Seconds
                                                                                                                                                                    I MPPKTPRKTAATAAAAAAEP.....TPMQKQKMNPSMETSNKFEK 971
                                                                                                                                                                                                                                                                                                                                                                                         42408132
nucleic search, using trame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                            16154066 seys, 8097743376 residues
                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Listing first 45 summaries
                                                                                                                                                                                                                                 Xqapop 10.0 . Xqapovt
                                                                                                                                                                                                                                                        Ydapop 10.0 . Ydapext
Eqapop 6.0 . Eqapext
Delop 6.0 . Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post processing: Minimum Match 0%
Maximum Match 100%
                                                                                                                     US 09-026-459A 49
4496
                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                               BLOSUM62
                                                                                                                                                                                                               Secorating table;
                                                                                                                            Lifle:
Perfect score:
M protein
                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                            Searched:
                                        Rath on:
```

Command line parameters:

Madel frame promodel -bRV-yth

Use Transcriptor and the second of the se

```
om qss_mus:*
om qss_other:*
em_qss_pro:*
em_qss_tod:*
                                                                                                                                                                                         4b_48s;*
cm_48s_bum.*
cm_48s_bum.*
cm_48s_bum;*
em_48s_bum;*
em_48s_bum;*
em_48s_bum;*
                                                                                                                                                                     em_estiun:*
                                                                                                                                                                                 • : wols⊶ wa
                      em_esthum:*
em_estin:*
                                                                 em_estpl:#
em_estro:#
em_hte:#
                                             em_estmu:*
em_estov:*
             em estba:*
                                                                                                                db est 2: *
                                                                                                     qb estl:*
latabase :
```

			0			SUMMARTES	
es	Result No.	Store	Query Match	° Query Match Length	LB	ib	beseription
1	-	1554.5	34.6	1364		AK011.46	AK(0.11.0246 Mark masses
	7	1551	34.5	1051	<u>-</u>	BM561083	BMS61083 AGENCHURI
	, ~ .	1254	27.9	67.6	5	AL597811	ALCO7811 DKFZp+140
	4.	1208	6.95 6.95	ທີ່ ອີ່ໄ ອີ່ຊີ		BM453724	BM453724 AGENCOURT
	O 4	1048 5	 	1 a		15 M 5 C C C C C C C C C C C C C C C C C	TRUCORDE SCOOL SE
٥	^	1056.5	23.5	914		AA763411	AA764411 vw54a04 7
o	သ	1030	6.25	694	÷:	BE082816	
Ç	2	1013	22.5	871		AA763485	AA76.4485 vw54h01.r
	01	1004	라 : 대 :	5.56		BC2553544	EG25454 662464278
	- :	മ മ വ	22.0	1001		BM475603	BM475604 AGENCOURT
	7 .	7 6/2 7 0/2	x 3	~ 0 X U		Albahota	A(646048 9W54a)0.X
	7	46.6 J	0.1.0	000		AW 5562 54 A 164 606 7	AWARBZ34 CM3 HIDIE
	- L'	6.96	15	3.50		B115156#	*:/04** **********************************
	16	596	21.3	594		AV715543	AV215544 AVZ15544
	17	មិនម៉	12	30 (C)		BG149050	B:149050 na88c01
	18	947.5	21.1	7 14		BF144857	BF144857 60179034
	7	6.35	20.8	539		AL692790	AL692790 DKFZp3131
	20	613	20.3	615		AA959836	AA959846 VW54h01.8
	٦.	806	C4 :	797		BE5 49278	DEF (3278 60106 (567
	01 C	900	0.051	1154		BM802746	BMH02746 AGENCOURT
	7 (8. 4.0 4.0	2. 2. 2.	505		ALS 49633	ALS99644 DKFZp414P
	4 C	ນ ວ ໝວ	7 G) () () () ()		#C25527/	HOLEGEY AGENCOUR
		100.7	 	1 5		- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	ALLESS THE TAKE THE PARTY OF THE
	5.5	869.5	6	. C.		BG244088	5 1 1 2 1 2 1 2 2 1 2 1 2 1 2 1 2 1 2 1
	89	864	19.2	623		AW583181	AW583181 iallh09
Ų	58	844	18.8	484		BE168095	BE168095 QV3 HT051
	3.0	833.5	18.5	646		BM490416	HM490416 pqp2n.pku
	3.1	824	18.3	4.53		AW502887	ANJORBY UITHER
	C.	x.	~ Œ	u 4: u		HEE692220	BEEG2220 ut 26e03.x
	ابدا ابدا	න : වැ. වැ.	18.1	C1 C1 U1		AA072780	AAC72780 mm76a05.r
Ç	34	ိ	17.9	597		BE941246	BE941246 MRO HT015
	ر د د	708	₽. / T	φ. •		BI553447	HI22447 604194806
	2.0	7 C		76/		All 5 to 5 to 5 to 5 to 5 to 5 to 5 to 5	All 1757 All 46 4757
	- 0	107	\ e \ c	* C = C		AW50.35.4	ANYORS STATE THE HEND
	p 3	7.75	10.2	\$ BOZ		534557.48 ************************************	MM4 SEV Z8 AGENCOURT
	40	*T/	1 2 2	0.70		AAA 9 9 7 0 9 B B G S S A S 3	AAASA704 VWS4404 S
<	· 7		: E	104		AA3 734 37 ATENERSU	
,	7.0	354) K	7 T W		0.2000.200 0.00.4 0.40.400	Visite Value (No. 1977)
٤	1 ~	- 893	·	. ~		3 5	NOTE A TO SECURITE AND A SECURITE AN
	4			6.6.6		C82304	

ALLCNMENTS

AKOL1246 Mus musculus 10 days embryo whole body cDNA, RIKEN Lull length	erriched library, clone:2600017M22.retinoblastoma L full insert sequence. AR011246.	AK011246.1 GI:12847243	HICE CAP trapper. Mus musculus (strain:C57BL/6J) 10 days embryo cona to mRNA,	clone_lb:RIKEN tull-length enriched mouse chNA library clone:2600017M22. Mus musculus	Eukaryota; Metazoa: Chordata; Craniata; Vertebruta; Euleleostomi; Mammalia; Eutheria; Rodentia; Sciuroquathi; Muridae; Murinae; Mus.
RESULT 1 AKO11246 LOCUS DEFINITION	ACCESSION	VERSION	SOURCE	ORGANISM	

```
CNIOBVKNYVEKNETPFINGLAIVSENGLPPYRESI SKRYFEVYLKNEOLDAFLELDHD
STATOTDPIEDSFETERTPRKNNPDEEANVVTPHTPVRTVMNTIOOLMVILNSASDOPSE
NLISYPNNCTVNP?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone_lib="RIKEN full-length enriched mouse cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /translation-"MPPKAPRAAAAEPPPPPPPPPPPREDDPAQDSGPEELPLARLEFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OLDEMPETETELOKSTETSVYKFFDLLKRIUSTKVUNAMSRILIKKYNVI CALYSKLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RTCELIYLTQPSSALSTEINSMLVLKISWITFLLAKGEVLOMEDELVISFQLMLCVVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YFIKFSPPALLREPYKTAALPINGSPRTPRRQONPSARTAKQLENDTRIIEVLOKEHE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RIEBFEFIALGOKLKVPDHVKERAWI I WEKVSSVING LLEGY LOAKKELWGICTFIAAV
                                                                                                             obna library was prepared and sequenced in Mouse Genome they loged a Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Library in RIKEN. Division of Experimental Animal Research in Riken contributed to
                          Figure visit our web site (http://genome.gsc.riken.go ]p/) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    253 GAGÉTIGGGGGAGGGTTGAGTTTGAAGAATTGAAGAGGCCAATTATTGCALTA 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 193 PARTORANDO DO CONTRACO CONTRACO DE CONTRACO CONTRACO CONTRACO CONTRACO DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE SERVIDA DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21 Problabrancoment Profiteriol (Classificated)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41 AspleuProLeuValArgLeuGluPheGluGluThrGluGluProAspPheThrAlaLeu 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            fortex#data source:MSE, source key:MGI:97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1364
303
25
19
63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "CCMT:0009::EANTOM_DB::E600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           346 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /dev_stage-"10 days embryo"
1. .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref-"MCD:MGI:1905260"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /protein_id="BAB27493.1"
/db_xret-"GI:12847244"
/db_xref-"MGD:MGI:97874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism-"Mus musculus"
/strain-"05/BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-026-459A-49 (1 871) x AK011245 (1-1364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref."taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       307 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ocation/Qualiflers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clonc-"2600017M22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /codon_start-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4.56e-144
1554.50
80.00%
73.90%
34.58%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  evidence: ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /gene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             151. .>1364
/gene="Rb1"
Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HOSt: SOLK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rost Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              dene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PEATURES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kawaii, Shinagawa, A., Shibata, K., Yoshino, M., Itoh, M., Ishii, Y., Arakawa T. Hara A. Fukunishi Y. Konno, H. Adachi I. Fukuda S. Arakawa T. Hara A. Fukunishi Y. Konno, H. Adachi I. Fukuda S. Alaawa, M., Nishi, K., Kiposawa, H., Kondo, S., Yamanaka, I., Salito, T., Okazaki, Y., Gojobori, T., Bono, H., Kasukawa, T., Salito, R., Kadvia, K., Matsuda, H., Ashburner, M., Bataloy, S., Casayant, T., Fishelman, M., Casaterland, T., Gissi, C., King, H., Kochiwa, H., Kuchi, P., Lowis, S., Matsuo, V. Nikaido, I., Perolo, B., Kochiwa, H., Wanneh, P., Lowis, S., Matsuo, V. Nikaido, I., Euruno, M., Aono, H., Baldarelli, R., Barsh, G., Blake, J., Bolielli, D., Bojunga, N., Carninci, P., de Borslödo, M., Brownstein, M.J., Bait, C., Fletcher, C., Fujita, M., Gariboldi, M., Custincich, S., Hill, D., Hofmann, M., Hume, D. A., Kamiya, M., Lee, N. H., Lyons, P., Marchionni, L., Mashlum, J., Mazzarelli, J., Monbaerts, F., Nordone, P., Bloy, S., Schonbach, C., Seya, I., Shibata, Y., Sinch, K., Schonbach, C., Seya, I., Shibata, Y., Sinch, K., Schonbach, C., Wilming, L., Waseyawa, Y., Kawaji, H., Toyo-oka, K., Wang, K., Haseyawa, Y., Kawaji, H., Kohtsuki, S.
                                                                                                                                                                                                                                                                           Carninci,P., Shibata,Y., Hayatsu,N., Suqahara,Y., Shibata,K.,
Itoh,M., Konno,H., Okazaki V., Muramarsu,M. and Hayashiraki,Y.
Normalisation and subtraction of capt rapper selected conns. to
prepare full-lingth and libraries for rapid discovery of new Jenes
Geneme Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Shibata,K., Itoh,M., Airawa,K., Nagaoka,S., Sasaki,N., Carninci,P., Suninci,A. Akiyama,J., Nishi,K., Kitsunai,T., Tashiro,A., Itoh,M., Sumin,N., Ishi,Y., Nakamura,S., Hazama,M., Nishine,T., Harada,A., Yamamoto,R., Matsumoto,H., Sakaquchi,S., Ikeqami,T., Kasihwaqi,K., Yenyiakas,J. Inoue,K., Toqawa,Y., Tawa,M., Ohara,E., Waninki,M., Yonnia,Y., Shibawa,T., Orawa,K., Tanaka,T., Matsunia,S., Kawai,I., Okaraki,Y., Ishibawa,T., Orawa,K., Tanaka,T., Matsunia,S., Kawai,I., Okaraki,Y., Nitra,A., and Hayashiraki,Y., Sequencing pipeline with 384 multicapillary sequencer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (FIRFN), Tabletating for Genome-Physical and Chemical Research Ground Sciences Center (6SC), RIKEN Vokolama Institute 17722 Suchier-Par Trainminks, Yukohama, Ranalawa 230-0045, Japan (E-mail:genome-resempse.riken.go.)p, 0PR:http://penome-resempse.riken.go.)p,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S. Adachi, J., Alzawa, K., Akahira, S., Akimura, T., Acmo, H., Arrai, A., Arakawa, T., Baldarelli, R., Bono, H., Brownstein, M., Bull, C., Caroinci, P., Fukuda, S., Fukuno, M., Hanaqaki, T., Hara, A., Hayatsu, N., Hill, D., Hiramoto, K., Hiraoka, T., Hori, F., Humc, D., Imotani, K., Ishi, V., Hoh, M., Isha, M., Saski, T., Karo, H., Kawai, J., Kojima, Y., Konno, H., Kouda, M., Koya, S., Kurihara, C., Mateuyama, T., Miyaraki, A., Nishi, K., Nomira, K., Numaraki, P., Ohan, G., Quarayama, T., Maro, H., Sallo, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Salto, H., Sallo, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Schrimi, L., Shibata, K., Shibata, Y., Shinaqawa, A., Shiraki, T., Sodabe, Y., Shina, M., Ingami, M., Tayawa, M., Shiraki, T., Yamanura, T., Yamanaka, I., Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Quarkenbush, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Functional annotation of a full-length mouse cDNA collection
Nature 409 (6821), 685 690 (2001)
        Carninci,P. and Hayashicaki,Y.
High-officiency full-length cDNA cloning
Meth. Engmol. 303, 19-44 (1999)
9427923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hayashizaki,Y.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21085660
                                                                                                                                                                                                10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20499374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11217851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                          AUTHORS
                                                                                                             JOURNAL.
                                                                                                                                                                                                PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEFFERENCE
                                                                                                                                                    MEDAL INC
                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          THIRNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PATRIAL
                                                                                                                                                                                                                                                                                                                                                                  111.1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
```

		FESTILL 2	<u>:</u>
		7 7 7	3 3
7	THE AN ANTIBATION OF THE PART OF THE PROPERTY OF THE PART OF THE P		3
	Thi HeGloGloLeuMet Met HeLeuAsnSerAlaSerAspGloProSerGluAsnLeu	124	5
323 1272	Asniculaspoluciuva i Asniva i i eProprodi sthr Prova i Arqfin va i Metasni i i i i i i i i i i i i i i i i i i	121 4	5 3
303 1212	AAAACACTICAGACTCATAGACTTTTGAAACAGAAAACAAAAAAAAAA	107	5 3
1152	TATGAAGAAGTITATETTAAAAAAAAAATTTAGATGCAAGACTGTTTTGGATGATGAT	1093	<u>2</u>
283	TyridudufleTyrLeuLysAsuLysAspLeuAspAlaArqLeuPheLeuAspHisAsp	26.4	5
263 · 1092	Ashiber Level y Lew Wall Phriber AshiG y Lew ProGlawal Gluman Lew Ser Lysarg 	244	5 3
10 42	CACHASE FAATATAGAGTGAAAAAATGTTATTTCAAAAATTTTATCATTATA	474	ä
243		74.4	5
27.6	GPTPGGATACCAAAACAAPTAGAAAATGATACGAGGATTATCGAGGTGTCTGTGTAAAGAA	; ;	i ŝ
912	ACAGCTGCACTCS CCATTAATGGTTCACCTCSAAS ASSISSAAGAS GCTSAAAATAAGAAG	8.5	3
243	thtd/yser	241	5.5
240 852	CystallenAspTyrPholletysLeuSorProProMet.LeuLeuLysGluProTyrLys 	73.4	5 3
220 792	20). ATALOSSI VOLVALLO VOLLAMO OTAANSPARPLO VALLINSKA PRESSOLISTA MALLA (L. 220). 1111 HALLITTI HALLITTI HALLITTI HALLITTI HALLITTI HALLITTI HALLITTI HALLITTI HALLITTI NAARAOTAADAADAADAADAADAADAADAADAADAADAADAADAAD	7.83	5 \$
200 732	HeSerthelolotteasserataleovaleesyssertepitetepeetresseratelli	181	5 3
180 672	LoubbesortystondluArgThrCysGluLeutTeTyrLeuThrChhProSerSerSer 111:::1111111111111111111111111111111	16.1	5 3
160 612	SerThrLysValAspAsnAlaMetSerArqLeuLeuLysLysTyrAspValLeuPheAla 111111111111111111111111111111111111	141	5 =
140 552	G101/38A8041@T04168@VA1H18438P 111111:::111111	121	5 3
120 4 92	lephellealaalayalaspLeuAs 	101	5 3
100	GlyGlyT IIII GAAGGAI	H1	5 5

* 801 95**W**H

```
/Lissu=_Lype="ref inoblastoma"
/lab_host="DHIOB (phage resistant)"
/note="Ordan: eye; Vector: pCMV SPORT6; Site=1: Not1:
Site_2: Sall; Cloned unidirectionally. Primer: Oliqo dT.
Average insert size 1.75 kb. Library constructed by Life
Technologies."
                                                                                                                            Eukaryola; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                       cDNA Library Preparation: Lite Technologies, The cobba Library Arrayed by The CLM.A.C.B. Consortion (LLNL) DNA Sequencing by Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be formed through the LLM.A.c.E. Consortium/LLML at: http://mage.lll.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     476 GluserPhelletysAtaGluslyAsniculhrAtqGlumerTletysHistcucluArq 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  304 GAAAGTTTTATCAAAGCAGAAGGCAACTTGACAAGAAAGTGATAAAATATTAGAAGA 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             496 CysGluHisArqIleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeu 515
                                                                                                                                                                    1 (bases 1 to 1051)
BiH MGC bitps://mgc.nci.nih.gov/.
National Institutes of Health, Mammallan Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           396 TyrTyrArgValMetGluSerMetLeuLysSerGluGluGluArgLeuSerlleGluAsn 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  64 TATTACCGAGTAATGGAATCCATGCTIAAATCAGAAGAAGAAGATTALCCALTCAAAAT 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              436 ValValMetAlaThrTyrSerArqSerThrSerGlnAsuLeuAspSerGlyThrAspLeu 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    456 SerPheProTrp11eLeuAsnValLeuAsnLouLysALaPheAspPheTy11ysVal111e 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      376 AlaValGlyGlnGlyCysValGluIleGlySerGlnArgTyrLysLeuClyValArgLeu 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             416 PheSerLysLeuLeuAsnAspAsnIlePheHisMetSerLeuLeuAlaCysAlaLeuGlu 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 GCTGTGGGACAGGGTTGTTGGAATTFGGATGACAGGGATACAAACTTGGAGTTCGCTTG 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 of hers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism "Bomo dapieus"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-026-459A-49 (1-871) x BM561083 (1-1051)
                                                                                                                                                                                                                                    Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zelone lib-"NIH MGC 67"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        High quality sequence stop: 747.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone-"1MAGE: 5550905"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       197 4
                                                                                                                                                                                                                                                                              Email: cqapbs-r'mail.nih.qov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualitiers
5', mRNA sequence.
BM561083
BM561083.1 GI:18806043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6.96e-144
1551.00
93.26%
91.50%
34.50%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .1051
                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           330 a
                                                                                        human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                 .
.
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N
O
                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                            KEYWORDS
SOURCE
                      ACCESSION
                                                                                                                                                                                               AUTH: RS
                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                             VERSION
                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           င်
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <del>Q</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
```

```
ALSTRAIN EXT 14 AUG-2001
DEFEND CONTROL ST. WENG STORM CLONE
DEFEND CONTROL ST. WENG SEQUENCE. ALST NO SAPIENS CON CLONE
ALST NO SALE ST. WENG SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pousika'A., Wellenreuther.R., Mewes.H.W., Weil,B. and Wiemann,S.).
EST (Fousika A. Wellenreither.P. Mewes H.W., Weil,B. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bukaryota: Motasoa: Chordata, Orasiata: Vestiduata: Eutidiossiumi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This is the 5' sequence of the clone insert.
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer Research Center (DKTZ), Emil s.wiemanidkli, heidelberg.de.
sequenced by DKEZ (German Cancer Research Center, Heidelberg Germang) withis the GPNA s.guencity of nearting of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     576 ThrserAlaPheGlnThrGlnLysProLeuLysSerThrSerLeuSerLeuPheTyrLys 595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                516 TIPLys*1\sentys\real=\sqrt{\partyral}\real=\partyral}\real=\sqrt{\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral}\real=\partyral
                                                                                                                                                                                                                                                       5.46 AsnicuProTeuGlnAsnAsnHisThrAlaA}aAspMetTyrLeuSerProValArgSer 555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   494 AATCITGGIGGGGGAAAIAAIGAGAGIGGAGAGAGAIAIGITGITGIGIAAGAIGE 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              556 ProtystystystysClyScrThrPhraraValAsnScrThrAlaAsnAlaCluThrGlnAla 575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96 LysVallytArgleuAlaTyrLeuArgleuAsnThrleuCysGluArgleuLeuSerGlu 615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46 GluLeuMet ArgAspArgHisLeuAspGlnIleMet@ysSerMetTyrGlyIle@ys 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                656 tysValtysAsniteAsp LeutysPhetysTleTleValThrAldTyttysAspleaPr 675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6.75 oHisAlaValGinGluThrPheLysArgVal-LeulleLysGluGluClu-TyrAspSer 694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6.95 IlelleVal -----PheTyrAsnSorValPheMetGlnArgLestLysThrAsnIle 711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                        Max-Planck-Institute for Molecular Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   poustka@mpimg-berlin-dahlem.mpg.dc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       lhnestrasse 73, 14195 Berlin, Germany
rel: +49-30-84131623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ALS97811.1 GI-15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                German Genome Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Poustka A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fax: -49-30 84131128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (tases 1 to 727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Department Lehrach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             րդուցը
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              - RGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MUSULI *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ALS 37 H11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N. WW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
```

```
/note="Vector: pTripHEx2; Site_1: SfilA; Site_2: SfilB: cDNA-collection"
                           This clone (DKFZp31300816) is available at the RZPD in Berlin. Please contact the RZPD: Ressourcenzentrum, Heubnerweg 6, 14659 Berlin-Charlottenburg, GERMANY, Ensil Alsopetriphide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               585 LysserThrSerLewSerLewPheTyrLysUysValTyrArqLeuAlaLyrLeuArqLeu 605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62 ANIA PATITISTS AND SETTING STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  626 LeurheGlnHisThrLeuGlnAsnGluTyrGluLeuMetArgAspArgHisLeuAspGln 645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 666 IlelleValThrAlaTyrLysAspLeuProHisAlaValGlnGluThrPheLysArgVal 685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        746 AshilleTyrilleSetProfedlySetProTyriysHeSerCluClyLenProThrpro 765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        766 ThrLysMetThrProArgSerArgIleLeuValSerIleGlyGluSerPheGlyThrSer 785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           905 ALGC GGGGGAASGC PT TEST LOSGGSELAN BENKAS (CCCUCUGGSE) 925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                606 AsmihmaniysdinArghanlaaSerGlaRisProGlaheuGluRisHelleTrpThr 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              686 liculletys3luGluGluTyrAspSerIleTleValFheTyrAsnSerValFhaMetGln 705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                706 ArqLeulysThrAsnileLeuGlaTyrAlaSerThrArgProProThrLeuSerProIle 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         482 AACATCTATTTCACCTCTGAAGAGTCCATATAAAATTTCAGAAGGICTGCCAACACCA 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 AAATCTACCTCTTTCACTGTTTATAAAAAGTGTAICGGCTAGCCTATCICCGGCTA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      786 CludgsPhcCludgsIlcAsnGlmMctValCgsAsnSerAspArgValLcudgsArqSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            727
241
0
1
0
0
                                                                                                                                                                                                                                               /db_xref "taxon:900%"
/clone="DKFZp31300816"
/clone="lbF"?13 (synosym: hlcc2)"
/dev_stage="madult"
/lab_nost="Dh108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           198 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                        /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-026-459A-49 (1-871) x AL597811 (1-727)
                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           130 9
No s1 sequence available.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.7e-114
1254.00
99.59%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           161 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27.89%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Rest Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                    soarce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred No.
                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>ټ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ġ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>ئ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ė
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ž.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
```

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SHUCH
                                                                                                             q
                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                               а
С
                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                    2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ô
                                                                                                                                                                                                                                                                                                      EST 05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zhore-"Orqan: skin; Vector; pCMV SPORT6; Site_1: Not1;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dr.
Average insert size 2 kb. Library constructed by Life
                                                                                                                                                                                                                                                                                                  BM453724 BACC274 NH_MOC_72 Rome supiens cDNA clone IMAGE:5524814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homor sapiens
Eukaryota, Metazoa: Chordata; Craniata; Vertebrata; Enteleostomi;
Mammalia: Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA Library Preparation: Life Technologies, Inc., CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Appropriate Corporation Clone distribution: MGC clone distribution intornation can be found through the U.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  554 ValAtqSerProfystystystyserThrThrArqValAsnSerThrAlaAsnAlaGlu 572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HELLELLELLE HELLE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 845)
NIH-MGT http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               493 tendinArdOysGluHisArdIieMetGluSerLenAlaTrpLenSerAspSerProLen 512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                513 PheAsptzeulletysGluserfysAspArgCluCtyPrcThrAspHigtzeuGluserAta 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   68 TTTGATCTTATTAAACAATCAAAGGAGGGAGAAGGAACTGATCACCTTGAATCTGCT 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 544 PystrolonAsni ontrolondi InAsnAsnHistbe AlaAlaAspMortyri onSorbro 1552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        662 GCFGAAGGAAGCAACCTTCTAAACCAGTGAAAAACTACGCTTTGATALTGAAGGATGA 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="NHH_MGC_72"
/lissue_type="melanotic melanoma"
/lab_host="DH10B (phage_resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          http://image.llnl.gov
Plate: LLAM12206 row: e_column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            243 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Average insert size 2 kb.
Tacheologies "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fissue Procurement: AIGC/DCID/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Caps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GS UP UZ6 459A 49 (1-871) x BM453724 (1 835)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 High quality sequence stop: 647.
Local Loc/Qualitiers
1. .835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /elone-"IMAGE:5528814"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-ramail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    137 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                   BM453724.1 GI:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fechnologies.
210 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8.050-110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1208.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92.91%
91.04%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26.878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                     5', mKNA sequence.
BM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            254 a
                                                                          826 Aspellu 827
                                                                                                                                                 722 "INTGAN 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              numera a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alaquiment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORTY Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOUTOR
                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANI SM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JUSTINAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                               HM4 5 17 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                       PLSULL 4
                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            > MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3. E15 6
                                                                                                                                                                                                                                                                                                      71.51
```

Ξ ŝ $\frac{1}{2}$

```
EST 05 PEB 2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BM450031
AGENCOURT_6393544 NIH_MGC_72 Homo sapiens cLNA >lone IMAGE:5528037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryöla, Metazoa; Chordata; Craniala; Vertebrata; Euteleostomi; Mammalia, Eutheria, Primates; Catarrhini; Hominidae; Homo. [ (bases 1 to 1023) NIH-MGC http://mqc.nci.nih.gov/. NATional Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                   EMA Sequencing by, Ages, curt blosticare Corporation
Clone distribution: MGC clone distribution information can be
tound through the L.M.A.G.E. Consortiam/LLNL at:
                                                                                                                                                                                                                           746
                             613 LeuSerGluHisProGluLeuGluHisIlelleTrpThrLeuPheGluHisThrLeuGlu 642
                                                                                                                                                                                                                                                                                                                                                                                                       653 GLyTLeCystysVallysAsnileAspleatysPhetysTletTeVallhrAlatyrtys 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       673 AspLeuProHisAlaValGlnGluThrPhetysAraValLeuIletyscluctuctutyr 692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           693 AspSerlielleValPheTyrAsuSerValPheMetGlnArqLeuLysIhrAsnileLeu 712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             713 GlnTyrAlaSerThrArgProPro---ThrLeuSerProffeProHisTie-ProArqSe 741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               668 CAGTATGCTTCCACCAGGCCCCCTACCTTGTCACCAANTACCTCACATTALTCTCCAAG 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               728 CCCCTTACAAGTTTTCCCTAGTTTCACCTTTACGGAATTCCCTGGGAAGGGAACCATCC 787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
573 ThrGInAlaThrSerAlaPheGlttThrGInLysProLeuLysSerThrSerLeuSerTleu
                                                                                                    593 PhcTyrtystysValTyrArgleuAlaTyrtawArgleuAsnilirtawYsGluArglaw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            731 rProTyrLys---PheProSerSerProLeu---ArqllePro---ClyGlyAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: cqapbs-remail.nih.qov
Tissue Procurement: AFCC/RCTD/DEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         http://image.linl.gov
Plate: LLAM12204 row: d_eolomm:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           High quality sequence stop: 643.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /elone-"IMAGE:5528037"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 747 -HetyrileSerProLeutys 753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              788 TATATITICAACCCCTGGAA 809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BM450031.1 GI:18499071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5', mRNA sequence.
BM450031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BM450031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BM450031
```

```
Query Match:
                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No.:
                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                         TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 윤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BQ220275
SERVOURT_7572631 NTH_MST_92 Homo sapiens chun clone imAGE:6044522.
                                                                                                                                                         Zhota "organ skin Vector powy-Spokus, Site_1: Noti;
Site_2: Sail; Cloned unidirectionally. Primer: Oligo dr.
Average insert size 2 kb. Library constructed by Life
Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               122 FGTAACAGGGACCCFFCTAAAAGAAGTGCFFGAAGGAAGGAACTTTAAAAGAAAFTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FER HEAN BAND MAND THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            716 SerihrArdProProThrieuSerProffeProHisfleProArgSerProTyrtysPho 735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    756. Tyrtyst (cSerd) uG (yteathrothrothroysmetthroangseralg) Letael 775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #06 (ystystonargebeaspi)c0103/yscrasp61;aalaasp61yScriysHisLoubro 835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HELLELETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELlettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                242 CCTAG FICACCCTTACGGATTFFFFGGAAAATFTATATFFFAGGGGTGTTGAAAAGTFFA 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             482 AAAAAAGIAGGCTITGATATTGAAGGATCAAAGCAGATGGAAGIAAAAAAATTTCCCA G41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          846 OlyGluSerLysPheGlnGlnLysLeuAlaGluMetThrSerThrArgThrArgMetGln 855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 AAAGIGAAGAAFAFAGACCTTAAAFTCAAATGAFTGTAAGAGGATAGAAGGAFGTTGCT 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               856 LystlaLysMetAsnAspSerMetAspThrSerAsnLysGluGluLys 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1923
216
0
0
0
//lowe_lib-"NIM_MGG_72"
//locue_lipe "melacoma"
//lab_host="DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          38 09 - 26-459A-49 (1-871) x BM450031 (1-1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RQ220275.1 G1:20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5.12e.190
1111.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        haman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                 BASE CHINT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BQ220275
Lanus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYW RES
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                               NICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
```

```
/notc="Organ: testis; Vector: pcMV-SPORTE; Site_1: Not1: Site_2: Sall: Cloned unidirectionally; oligo-dl primed. Average insert size 2.5 kb. Library enriched for full-length clones and constructed by Lile Technologies. Note: this is a NHI-MYP Library."
                   Editional Metablar Chardala, Canidata; Vertebrata; Enteleosion Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo, 1 (bases 1 to 881) Min MG http://mg.to.inih.gov/.
                                                                                                                                                                                                                                                           cDNA Library Preparation. Life Rechnologies, Inc. (cDNA Library Arrayed Ly. The L.M.A.R. F. Confout tion (LLNL.) DNA Sequencing by Ademonth Bioscience Cuporation Clone distribution. MSC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         123 SATIONO LORAMANO NASSERASSICASANCASANISCASSANIACONANACIA 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 183 GAAAATGATACAACAATTATTCAAGTTGTGTAAAGAACATGAATGTAATALAGALGAC 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    243 GIGAAAAAFIGPPPATPPTAAAAFTTTATAGCPPPTFATGAAPTGFGTPGGAGTFGFAGAAAA 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               271 AsnlysAspileuAspAlaArgleuPheleuAspHisAspilysThrleuGlmihrAspSer 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    363 AATAAAGATCTAGATGCAAGATTATTTTTGGATGATAAAAGTCTTGGGACTGALTGT 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        291 ILeAspSerPheGluThrGloArdThrProArdLySSerAsoLeuAspGluGluValAso 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            208 MetClaAspAspLeuVallleSerPleClnLeaMeticuCysValleuAspTyrPhCllc 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 AFGGAAGAFGAGFGATTTGATTTGAGTTAA19CLALGLGCCCCCGAGATTTAA1 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AsnSerLeuGlyLeuValThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /lissic_ippe "embryboul varyhoda, well line" /lab_host-"DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                    found through the L M A G E Consertium/LLANL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            881
231
1
3
59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     118 IpstelserFroFroMetlealeul,sGluFroTyrLycThr-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                         Plate: LLAM13287 row: e column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matcher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism-"Homo sapiens"
/db_xrrf-"+axon:9606"
/clone-":MACE:6044522"
                                                                                                                                                                              Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib="NIH_MGG_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-026-459A-49 (1-871) x BQ220275 (1-881)
                                                                                                                                                                                                                                                                                                                                                                                                                                                 High quality sequence stop: 690.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualitiers
                                                                                                                                                                                                                                     Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7.26e-99
inap kn
78 qi*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            242 Glyser-----
                                                                                                                                                        Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       78.578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24.438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .881
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      313 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
```

```
mknA linear EST 27-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Marra,M., Hillier,L., Allen,M., Howles,M., Dietrich,N., Dubuque,T., Garshi,S., Kneabart, Lary,M., Le,M., Martin,J., Morris,M., Schelletherg,K., Sieptue,M., Tan,F., Inderwood,K., Moore,R., Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota: Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            vw54a04.rl Soares, mammary_qland_NMLMG Mus musculus cDNA clone
IMAGE:1247598 5' similar to qb:M15400 RETINOBLASTOMA-ASSOCIATED
PROTEIN (HUMAN): qb:M26391 Mouse relinoblastoma susceptibility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This clone is available royalty-tree through LLNL; contact the IMAGE Consortium (into*image.llnl.gov) for further information.
                                                                                                                                                                                                                 351 ThrValAsuProLysGluSerIleLeuLysArqValLysAspIleGlyTyrIlePheLys 370
                    424 AFACACACITITGAAACACACACACACACCACGAAAAAACTAACCITGATGAAGAGGTGAAT 482
                                                                              411 ValideProProProHisthrProValArgThrValMetAsnihrlFeGlnGlnheuMetMet 330
                                                                                                        131 HelenAsuSerAlaSerAspGlnProSerGluAsnLeuIleSerTyrPheAsnAsnCys 350
                                                                                                                                                                                                                                                                                                                                                       603 ACAGTGAAFCCAAAAGAAAGTATACTGAAAAGAGTGAAGGATATAGGATACATCTTTAAA 662
                                                                                                                                                                                                                                                                                                                                                                                                            471 GlutysphoklatysklaValGlydlnOlyCysValGhilloGlySorGlnArgTyrtys 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   664 GAGAAATTTGGTAAAGGTGTGGGACAGGTTGTGTGGAAATTGGAFGACAGCGATACAAA 722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          491 LeuGlyValArqLeufyrTyrArqValMetGluSerMetLeuLysSerGluGluGluArq 410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            723 CTERMAGEL GOCLEGIATE ACCGAGEAATGGAATGCATCACTTAAATCAGAAAGAAGGA 782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      411 LeuserIleGlnAsnPheSerLysLeuLeuAsnAspAsnIle-PheHisMetSer-LeuL 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Toutis MO 64108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WashU-HHMI Mouse EST Project
Washington University School of MedicineP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               430 enAlaCysAlaLeuGluValValMetAlaThrTyrSer 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Seq primer: 28ml * rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4444 Forest Park Parkway, Mcx M501, St
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Marra M/Mouse EST Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /ordanism "Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: mouseest watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein (MOUSE);, mRNA sequence.
AA763411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The WashU HHMI Mouse ESI Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      High quality sequence stop: 422.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        914 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Localion/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA764411.1 G1:2814158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 914)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         314 286 1800
314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xret
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mas muscuius
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOTISH MOUSE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA76.1411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOULTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NULLINIAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA76 (4117c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AULHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   I-DINNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE.
                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         =
```

/clone_lib="Soarcs_mammary_gland_NMLMS" /sex="lemale (lactating)" /tissue_type="mammary_aland"

Zelone-"IMAGE:1247598"

```
Anote-Tector: PT7145-Pac (Pharmacia) with a modified polyfinker; lst strand clbA was prepared from mammary quand fissue from a lactating female, and was then primed with a Not 1 - Oligo(df) primer. Bothle stranded clbA was ligated to Eco Ri adaptors (Pharmacia), digested with Not 1 and cloned into the Not 1 and Eco Ri sires of the modified pf773 vector. Library is normalized. Library was constructed by Hento Soares and M. Farima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    [11::: [11::: [11]] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 578 CTAAAGCGGGT-AAGGACGTTGGCGACATGCTTAAAGAGAAGTTTTCTA AGGTTGTGG 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         379 GlmClyCysValstaffevilySerslmArTytCystemGlyValAraGeolyrTytAra 398 HILLIIII HILLI HILLI HILLIIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7
8
7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             279 PhelicuAspRisAspLysThrLeuGlnThrAspSerTTleAspSerTheGinThrOfthArg 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            914 TITITGGATCCAGAAIAAACCCTCGAGCTGT - TCCTTTAGGCCTTTTTAAAGCGGGAG 857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 856 ACCCACGGAAAACCACCALIGI GAAGCGCCAAAACGGGITACTICCTCCCAAAACGGTT 798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         319 ArqThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAlusSerAspGln 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       339 ProserGluasniculleSerTyrPheAsnasnCysThrValAsnProtysGluser11e 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             359 LeutysArqValLysAspileClyTyrilePhetysClutysPheAlatysAlaValGly 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            399 ValMetGluSerMetLeunysSerGluGluGluArgleuSerilleGluAsnPheSernys 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    562 STGATGGAATCCATGCTTAGATCAGAAGAGAGAAGTTTGTCCATTCAGAA111TAGCAAA 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           419 LeuLeuAsnAspAsnilePbeHisMetSerLeuLeuAlaCysAlaLeuGhvAlValWet 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                439 AlaThrTyrSerArgSerThrSerGlnAsuLeuAspSerGlyThrAspLeuSerPhePro 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         479 HetysAladluGlyAsmieuThrAraGlaMetHetysHisLeuGluAra/ysGluHis 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            322 AFCAAAGTGGAAGCCAACTTGACAAGAGAAATGATAAAAGATTTAGAAGATGTGAAGTT 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             519 SertysAspArgCluClyProThrAspHisLeuCluSerAlaCysProLeuAsnLeuPro 538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            442 GETACETATAGGASAASTACATTGGAGCATCTTGATTGTGGAACAGATTTGTGCTTGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   299 ThrProArgLysSerAsnLeuAspGluCluValAsnVallleProProHisThrProVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   499 ArgileMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLyssiln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 officers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                        261 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-026-459A-49 (1-871) x AA763411 (1-914)
                                                                                                                                                                                                                                                                                                                                                                                        217 4
/lab_host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82.148
75.978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
                                                                                                                                                                                                                                                                                                                                                                                        HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Aliqument
                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
```

```
Louis, Mo 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Washington University School of MedicineP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4444 Forest Park Parkway, Box 8501, St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Marra M/Mouse HST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein (MOUSE);, mRNA sequence.
09 926-459A-49 (1 8/1) x BESB2846 (1-694)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WashU-HHMi Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA753485.1 GI:2813232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 871)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA763485/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STURTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCUS
                                                                                                                                                  댪
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           먑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ξ
                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                        겫
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             습
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Project! This entry can be seen in the following URL
(http://www.lidwig.org/ba/sorigits/gorlundiz_pictiolis-PF2-AT0642-219
200-014-c068t3-2000-02-218t4-1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Adev_stape="Adoi" | Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi: Adoi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST 12-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 694)
Dias Neto.E., Garcia Correa, E., Verjovski-Almeida, S., Briones, M.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: asimpson*ludwiq.org.br
This sequence was derived from the FAPESD/LICE Hygan Cannor Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RC2_HIO642_210200_01f_c06_BT0642_HGMG_sapiens_CDNA, MRNA_Sequence.
BE082846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nagai,M.A., da Silva,W. Ir., Zag.,M.A., Rurdin,S., Costa,F.F., Goldman, G. H., Carvalho, A.F., Marsukuma, A., Raha,G. S., Simpson,D. Hrunstein,A., deoliveira,P.S., Buchor,P., Jongeneel,C.V., O'Hare,M.J., Soares, F., Rrentani, R.F., Feis, L.F., de Souveis, S. T. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia: Butheria: Primares: Catarrhini: Hominidae: Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Shotqun sequencing of the human transcriptome with ORF expressed
839 LeugloascaanHisThralaAspM="TyrLeuserPr-ValArysorProLyst,s="58
                                                                                                                                              959 LysGlySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAla 578
                              Natl. Acad Sri IISA 97 (7), 3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches.
Conservativo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   226 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism-"Homo sapiens"
/db_xre1-"taxon:9606"
/clone_lib-"BT0642"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           High quality sequence start: 58
High quality sequence stop: 669.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 stringency conditions.
1 129 c 127 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Onalifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Seq primer: puc 18 torward
                                                                                                                                                                                                                                                                                         579 PheGinThrdInLysProLealys 586
                                                                                                                                                                                                                                                                                                                                                               25 ITCCATACTCAGAAGCCATTGAAA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Simpson A.J.G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BE082846.1 GI:8473151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3.48e-92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1030.00
96.338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94.95%
22.91%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20202663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Matoba
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION ANCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HE082846/€
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HASE TONE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDICINE
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JUNKNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REYWING S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RICIN
```

```
linear EST 27 JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,l., Geisel,S., Kucaba,T., Lacy,M., Lo,M., Martin,J., Morris,M., Schelienberty,K., Steptow,M., Tan,F., Underwood,K., Moore,H., Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa, Chordata, Graniata, Vertebrata, Eureleustomi.
Mammalia, Eutheria, Fodentia, Sciuroquathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA763485
WWA5H01.rl Soarces_mammary_gland_mLMG_MMS_muscutus_crobe_crope
IMAGE:1247665 5' similar to qe.w15400 RFTINOFILASTOMA-ASSOCIATED
PROTEIN (HUMAN); gb:W26391 Mouse retinoblastoma susceptibility
                                                                                                                                                                                                                                           349 AssCysThrValAsaProLysCluSerileLeulysArgValLysAspileClyTyrtle 368
                                                     676 CACTGCACAGGATGAT - CAAAAGAAAGTATATACTGAGAAGAGGAGAAGAATATAGGATACATC 618
                                                                                                                       369 PheLysGluLysPheAlaLysAlaValGlyGlsGlyCysValGlulleGlySerGlnArq 388
                                                                                                                                                                                   617 TITTAAAGAGAAATTIGCTAGAGCTGIGGGACAGONIIGIGIGGAAATTGGATCACAGGGA 558
                                                                                                                                                                                                                                                                                                                                                                         409 CluArgleuSer HeClinAsiiPheSertgstauta aAsiiAspAsiiHeiPicBisMetSer 428
                                                                                                                                                                                                                                                                                                                                                                                                       429 LeufouAlaCysAlaLeuGluValValMetAlaThrTyrSerArgSerThrSerCluAsn 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 469 PheAspPheTyrLysVallleGluSerPhelleLysAlaCluGlyAssLeuThrArgClu 488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     257 ATGATAAAACATTTAGAACGATGTGAACATCGAATCATGGAATCCCTTGCATGCTCTCA 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                509 AspSorProLeuPheAspLeuIleLysGlnSerLysAspArqGluGlyProThrAspHIs 528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              529 LeuGlüSerAlaCysProLeuAsnLeu-ProLeuGlnAsnAsnHisThrAlaAlaAspMe 548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     489 MetileLysHisLeuGluArqCysGluHisArqIleMetGluSerLeuAlaTrpLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               548 tTyrLeuSerProValArgSerProLysLysClySerThrThrArgVal 565
```

```
First most contour PTT10 Pac (Pharmacia) with a modified polylinker; ist strand cDNA was prepared from mammary quant lissue from a lactafing lemmale, and was then primed with a Not 1 - oligo(dT) primer, Double stranded cDNA was ligated to ECO RI adaptors (Pharmacia), digested with Not 1 and cloned into the Not 1 and ECO RI sites of the modified pTT14 vector. Library is normalized. Library was coinced by Bento Soares and M. Falima Bonaldo. **
                                                                      This clone is available royally-tree through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  299 ThrittoAtqlqSGerAsa (JouAspClaCluValAssJVallleProficHlsThaftoV 318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   860 AGGCAAGGAAAAAAAAGCCTTGGGAGGGGCAAGGGGTTTTACCCCCCACAT----CCAG 804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   418 alArqThrValMetAsuThrIleGinGinLeuMetMetIleLeuAsnSerAlaSerAspG 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      244 GOCCATCCGAAAAICIIGIIGCCICCIICCAIAIIGICCCGIIACCICCAAAGAACAAIC 685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            358 TelevitysArgVallysAspileClyTyrilePhetysClviysPheAlatysAlaValS 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              624 OPPAGOCH GEGEL GACA FORGAGI FACAGCA LA FACACITECA GORGE GOATECTA TO CONTRACE 565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     198 raVa. Met GluSerMet Leulysser GluGluGluArq Leuser HeGlnAsnPheSerl, 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                418 ystanteuAsnAspAsnifePheHisMetSerf.cottonAlaCysAlateuGluValValM 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       438 etAlaThrTyrSerArgSerThrSerGlnAsuLeuAspSerGlyThrAspLeuSerPheP 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        458 TOTEPHEROBANDALEOHASBEOH 9SALABBOASPDRETYTTYSVALITOSIUSEEP 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     484 PGTGGATTGTGAAGGTACTTAATTTAAAAGGCTTTGATTTTTAGAAAGTGATTGAAAGTT 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BO3 FFOG-OVERTITICALACIACIACICACCATTAGGGGGGTTTTTTAATTTGGGGAAGTATGA 745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             348 InProserGluAsnLeutleSerTyrPheAsnAsnCysThrValAsnProLysGluSerT 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                684 TOCTAGGAGGTTAAAGGTFGTCTGCCCTTTAAAAGAGAGGGTTCTTAAGGCTGTGTGG 628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                =
                                                                                                                                                                                                                                                                                                                             /clone lib "Soares mammary_qland_NMLMG"
/sox="from.le (lactating)"
/tissus type="mammary gland"
/lab bost="NH10H"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
Conservative:
Mismatches:
                                                                                                                                               28ml 4 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        indels:
                                                                                                                                                                                                                                                      /ordanism·"Mus musculus"
                                                mouseest *watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US 09 026 459A 49 (1 871) x AA76 485 (1-871)
                                                                                                                                                                             Righ quality sequence stop: 495.
                                                                                                                                                                                                                                                                         /db aret-"taxon.10090"
/clone-"IMAGE:1247665"
                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.416 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1014.08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  80,34%
74,48%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22.538
Feb: 414 286 1800
                  Fax: 414 286 1810
                                                                                                                                                                                                                           H.7.
                                                                                                                                                  Seq primer:
                                                                                                                          MGI:661454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Rest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7 7 7
                                           Email:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Academient Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     scar St
guery Matebu
DBs
                                                                                                                                                                                                                                   SCH108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RASE CHUNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.:
                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N I CHE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \stackrel{\star}{\sim}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \stackrel{>}{\sim}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
```

```
HGZ5354743
02584278FI NIH_MGC_90 HOMO Sapiens ChNA clone IMARE:4472611 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bukaryola, Metazoa: Chordala; Graniala; Vertebrala; Enteleostomi;
Mammalia; Entheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases) 1.6 922)
NIH Mar http://www.nci.cib.gov/c.
National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Attacase, type "adenocarchnoma, cell line"
[Alab_host="DBHOB (phage-resistant)"
[Anote="Gram: Hiver: Vector: pAMV Spokfu; Site_1: Not1;
[Site_2: Sall; Glored unidirect ionally; olian dT primed.

Average insert size 1.7 kb. Library enriched for full-length clones and constructed by Lite lechnologies.

Note: this is a NHLMRC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cDNA Library Preparation: Lite Technologies, Inc., CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be clound through the L.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
    478 helleLysAlaGluGlyAsnLeuThrAraGluMetIleLysHisLeuriuAraCysGluH 498
                                                                             198 isArqIleMetGluSerFeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysG 518
                                                                                                                                                              °,
£
                                                                                                                                                                                                                                       548 roLeuGluAsnAsnHisThrAlaAlaAspMetTyrLeuSerProValAraSerProLysL 958
                                                                                                                                                                                                                                                                                                                     558 ystysGlyserThrThrArqValAsuserThrAlaAsuAlaGluThrGluAlaThrSetA 578
                                                                                                                                                                                                                                                                                 x
x
                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plate: LLAM18291 row. 1 colomn. 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_lib-"NIH_MGC_90"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop: 633. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone-"IMAGE:4472611"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                    578 laPheGInThrGInLysProLeuLys 586
                                                                                                                                                                                                                                                                                                                                                                                                                     27 CCTTCCATACTCAGAAGCCATTGAAA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BG253543.1 GI:12763359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2,066.89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1004.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       90.51%
88.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA sequence.
BG253543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BG253543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SCOLO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.0CUS
λ0
                                       qa .
                                                                                 ò
                                                                                                                  q
                                                                                                                                                            ô
                                                                                                                                                                                                  Ľ.
                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                                                                                                                                                                    ô
```

| TESTS CAPS: (1927) X BG233543 (1922) (1676 PETER |--|
| 25 |

```
n: testis; Vector: pCWV-SPORT6; Site_1: Noti:
I: Closed unidirectionally; oliqo-dT primed.
ert size 2.5 kb. Library enriched for clores and constituted by life Technologies.
is a NHTMGC Library."
                                         ition: Life Technologies, Inc.

1 by: The LW.A.G.E. Consortium (LLNL)

Applicant Blossience Corporation

MGC clone distribution information can be
LA.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          allocaspyrphologystocspropromette 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rLysValAspAsnAlaMetSerArgLeuLeuLysLys 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     eSeriysLeu-GluArgThrCysCluLeulleTyrLe 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    erThrGluIleAsnSerAlaLeuValLeuLysValSe 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ysGlyGluValLeuGlnMet.GluAspAspLeuValli 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLGTTAFACCCATTAATGGTTCACCTCGAACACCCAG 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATGTAATATAGATGAGGTGAAAAATGTTTATTTCAA $17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGGGGAAGTATTACAAATGGAAGATGATGTGTGGTGAT 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2="embryonal carcinoma, cell line"
04108 (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1001
224
10
10
10
65
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Longth:
Matches:
Consorvative:
Mismatches:
Indels:
                                                                                                                                       w. f column: 04
e start: 17
e stop: 734.
alifiers
                                                                                                                                                                                                                    Homo sapiens"
axon:9606"
GE:5575683"
"NIH_MGC_92"
sberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       603 (1-1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
             nih.gov
```

5

ŝ

```
polylinker; Ist strand cDNA was prepared from mammary gland tissue from a lactating female, and was then primed with a Not 1 - oligo(dT) primer. Bouble stranded cDNA was lighted to Eco Pt adaptors (Pharmacia), digested with Not 1 and cloned into the Not 1 and Eco Et sites of the modified pl713 vector. Library is normalized. Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST 29-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalia; Futheria; Rodentia; Sciurognathi; Muridae; Musilae; Mus.
1 (bases 1 to 842)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomį;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This clone was previously sequenced on the 5' end only, this new
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cdapbs remail.nih.gov
This clone is azailable reyalfy.free threadh H.N. ; contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       modified p1713 vector. Library is normalized. Library
Was constructed by Bento Soares and M. Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IMAGE Consortium (intodimage.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note: "Vector: p1713D Pac (Pharmacia) with a modified
257 ICHuAsnteuSertysArqfytGluGluHeTyrf.cuLysAsntysAsntysAspteuAspAlaAr 277
                                                           578 FGAAAATGTITGTAAAGGAIACGAAAGAAATITATGTIAAAAATAAAAGATGTAGAAGG 637
                                                                                                                                                      417 oValArqlbrVaiMetAsulbrlfeGInGInLeuMetIneLeuAsuserAlaSerAs 337
                                                                                                                                                                                                                                                                                                                                                                                                                                          758 AGITAGGACIGITATGAACACIAFCCAACAAITAATGATGITTAAATTCAGCAAGIGA 817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     337 pollubrosergluAsnicuille Sertyr-PheAsnAsnCysthrVal AsnProtysCl 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55 uSerlleLeuLycArd ----ValLysAspileGlyTyrIle----PhetysGluLys- 372
                                                                                                                                                                                                                                                  297 nArqThrProArqLysSerAsnLeuAspGluGluValAsnVallleProProHisThrPr 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          878 AAAGCIATATOOGGAAAAGAAGGTAAGGAATATAGGAATAAGCIGCTITITAAAGAAAAA 937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MINA LIGGEL EST 29-APP WASALD XI SOATES MARMA LIGGEL EST 29-APP WASALD XI SOATES MARMANY AUSTRIAN CHORE IMAGEL 2478-10 1 Similar to qb.M26391 Mouse retinoblastoma Austropia ibility protein (MOUSE); mRNA sequence.
                                                                                                                         277 (thoubholiouAspHisAspHysThrLouGInThrAspSorTleAspSorPheGlutthrG)
                                                                                                                                                                                                                                                                                                                                                                                                                Zetone 119-"scaros_mammary_dlated_NMLMC"
/sex="lemale (lastating)"
/laste type="mammary qland"
/lab host="(HIOB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCL CGAP http://www.ncbi.nlm.nib.gov/nciegap.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Possible reversed clone: polyl not found
High quality sequence stop: 482.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:10090"
/elone "iMAGE:1247610"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          data is from the 3' end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PheAlatysAlaVatety 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   938 TITITOGGTAAAAAGGGTGGGG 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A1646038.1 G1:4724513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tumor Gene Index
Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ~ ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus museulus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MGI:661298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PESANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JUST SENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INSEMMO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Softe 'E
```

```
EST 04 FEH Z000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AW108234 588 Dp. mRNA linear ESL 04 FEM 200 CM3-HT0181-181099-023-e10 HT0181 Home sapiens CDNA, mRNA sequence. AW368234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        302 CTACAGAAAGCATAGAAACCAGIGTCTATAAATICTITGACTTALIAAAAAAAATGAT 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         140 ThrSerfhrtysValAspAsnAlaMetSerArgteuteutgstystytAspValLeuPhe 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             160 AlakeuPheSerkyskouGluArqThrCysGlukeuTleTyrkeuThrdknaserser 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              422 GCACTETACAGCAAATTAGAAGGGAGGTGTGAACTTATATATTETGACAAAAATTAGCAGT 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180 SerIleSerThrGluIleAsnSerAlaLeuValLeuLysValSerTrpHeThrPhebeu 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       482 GCGTTATCTACTGAAATAAATTGTATGTTGGTGCTAAAAATTTGTTGTGATGACTTTNTTA 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               542 CTAGGTAAAGGAGAAGTATTACAGATGGAAGATGACGTGNTAATGTCAATTGAGGTAATG 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60 LeuCysGlftysLeuLyslleFroAspHisValAraGluAraAlaTrplæuThrTrpsitu 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2. CONCORROMANDARA CORROGRAMA CORROGRAMA ANTO CORROGRAMA ANTOCORROR OF THE CORROGRAMA ANTOCORROR OF THE CORROGRAMA ANTOCORROR OF THE CORROGRAMA ANTOCORROR OF THE CORROR O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40 GluAspLeuProLeuValArqLeuGluPheGluGluThrCluGluProAspPheThrAla 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             200 Feutalgschydlavalleschmerflaaspachvallicschbechlaumet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     220 LeudysValleuAspüyrbhelletysLeasserbroth oMethemicschildiden (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                               20 ProProAlaProProProProProProJudiuAspProGludiuAspSerdlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80 tysvalserservalAsp6lyvaltenslydtytttledintystystyschulentrp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120 LeadluLysAsaileGluIleSerValHisLysPhePheAsaLeuLeaLysGluIleAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240 LysThr61ySorAsnSorIow/NyLouValThrSorAsn61yLeuProvNoval6NuAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8 4 2
1 9 2
1 8
2 8
                                                                                                                                                                                                         Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        214 1
                                                                                                                                                                            Matches:
                                                                                                                                        Length:
                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                                                    : sdpg
                                                                                                                                                                                                                                                                                                                                                                                  US-09-026-459A-49 (1-871) x A1646048 (1-842)
       Ţ
176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AW368234.1 GI:6872884
                                                                                                                                    4.93e-87
979.50
86.42%
170 €
                                                                                                                                                                                                                                                                      21.79%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      260 Leuserigs 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       706 AGAAGTCAG 714
                                                                                                                                                                                                                                     Best Local Similarity:
266 а
                                                                                                                                                                                                         Percent Similarity
                                                                                                    Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ESI.
                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                    Pred. No.:
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AW368234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                   ORIGIN
                                                                                                                                                                            Score.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1,0000
                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    òλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ...
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              흔
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ö.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             o.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
```

```
US-09-026-459A-49 (1-871) x A1646097 (1-709)
                                                                                                                                                            ...
                                                                                                                                                                                                                                                                                                                                  급
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note-"Organ: Read_neck, Vector. puel8, Site_1. Shal, Site_2: Smal; A mini-library was made by cloning products Site_2: Smal; A mini-library was made by cloning products delived from organs. Partial application No. 166.716 - Ludwig Institute for Canner Peacarch profiles into the pirc 18 vector Peacarch profiles into the pirc 18 vector Peacarch transcription of tissue mRNA and clonA amplification were performed under
                                                                                                                                                                                                                                                                                                                                                                                                        This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be seen in the following HRL (HILL) www.lowit Presentations of Presentation of the HILL Plant of Manighth HILL 181095-023-0108.13-1999-10-188.14-1)
                    Eukaryola, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammelia: Puthoria, Filmatos, Catarthini, Hodinidao, Homo, I (bases 1 to 588)

HOCP Littp://www.lodaig.org/br/ORPSIPS

The FAPESP/LICE Human Cancer Genome Project
                                                                                                                                                                                                                                                 Ludwig Institute for Cancer Research
Rua Prof. Antonio Pludente 109, 4 andar, 01569-610, Sag Paulo-Sa,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25 Thrasphistophilosoraladys-Protopashiouprolouginashashtal 545 Hillilililililililililililililili.
63 ACIGAIGACIIGAAICIGCIIGTGTCOCICIITAAICTICGTCTCCACAATAAICACATAATAT 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  585 utysserthrscrucuscrucuthetyrtystysvaltyrargioaalafyrteaargie 605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Trplester Aspert Probable Appropriate Services (1987) 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              45 aAlaAspMetTyrLeuSerProValArqSerProLysLysLysGlySerThrArgVa 565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           183 AAATICIACIGGAAATGCASAGACAAAGCAAGGCTTCAGGCTTCCAGACCATT 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                638 uAsmibriouPysGluArgLouSorGluHisProWiluLouGluHisTleIloTrpTh 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.25 rLeuphesladisThrieuclinAsmoluTyrcluLeuMerArqAspArqHisLeuAspGl 645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 IGGOTOTOMATTOACCTITATITGATCTTATTAAACAATCAAAGGACCGAGAAGGA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :45 | IASDSerThrAlaAsnAlaGluThrGlnAlaThrSerAlaPheGlnThrGlnLySPrnLe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   low stringency conditions."
139 c 100 g 162 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism-"Homo sapiens"
/db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-09 026-459A-49 (1-871) x AW368234 (1-588)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence stop. 559.
Location/Qualifiers
1 588
                                                                                                                                                                                                                                                                                                                                                      Fax: +55-11-2707001
Email: asimpson@ludwig.org.br
                                                                                                                                                                                                                      Laboratory of Cancer Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib-"HT0181"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Seq primer: puc 18 torward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /dev_stage="Adult"
                                                                                                                                                                                         Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.2c 87
978.00
97.458
97.458
21.758
                                                                                                                                                                                                                                                                                                                               +55-11-2704922
                                                                                                                                                               Unpublished (1999)
  Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Leval Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alianment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Overy Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30 H in g
PROABLOM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HASE COUNT
                                                                              KEFFEREN.T
                                                                                                           AUTH: RS
                                                                                                                                                               PAGRINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F.A.I.I.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N 170 1.1
                                                                                                                                     TITLE
                                                                                                                                                                                         MMENI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MISIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ż
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
```

```
789 kg mena linear EST 29-APR-1999 (4-4h)7 XI Scares mammary_cland NMLMS Mas macculus cDNA cloue IMAGE:124757 3' similar to qb:MI5430 RETINOBLASTOMA-ASSOCIATED PROTEIN (HUMAN); qb:MI56391 Mouse retinoblastoma susceptibility A1646097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDNA was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gland tissue from a lactating female, and was then primed with a Not I - oligo(dT) primer. Double-stranded \circ CDNA was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ligated to E.O. &I adaptors (Pharmacia), digested with Not and cloned into the Not I and Eco N: sites of the modified pT713 vector. Library is normalized. Library was constructed by Hento Soares and M. Fatima Bonaldo."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mammalia, Butheria, Rodentia, Sciurograthi; Muridae, Murinae: Mus. (Losses 1 to 709)
N.1-53AF Hiter/www.nobi.mim.mih.acv/nologap.
National Mancer Institute, Cancer Genome Anatomy Project (CGAF),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This clone was previously sequenced on the 5' end only, this new
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: cgapbs-r@mail.nih.gov
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                      /note-"Vector: p17130-Pac (Pharmacia) with a modified polylinker; 1st strand cDNA was prepared from mammary
363 CTITITCAGCACACACACACAGAATGAGTATGAACICAIGAGAGAGAGACAIIIGGACCA 422
                                                                                                                                       665 sileilevalthralatyriysaspleufroHisalavalGlughrPheLysArqVa 685
                                                                                                                                                                                                                                                            /clone-"IMAGE:1247677"
/clone-lit "Scires mammary_gland_NMLMG"
/sex-lenale (lactaling)"
/lissue_type-"mammary_gland"
/lisb_bost="DH10B"
                                                                                                                                                                                                                                 685 ltcsllcLysCluClsClsTyrAspScrllcllcValDhcTyrAsn 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                709
187
16
21
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Possible reversed clone, polyT not found
High quality sequence stop: 369.
Location/Qualifiers
1...709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact. Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Adb vrof-"taxon.10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           data is from the 3' end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A1645097.1 CI:4724572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83.118
21.508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      966.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              877106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MGI:661365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      211 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESS ION
                                                                                                                                                                                                                                                                                                                        RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A::1::-45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                              A1646097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100
```

16 AlaAlaAlaGluProProAlaProProProProProProProGluGluAspProGluGln 35

£

Ξ

5

= $\frac{5}{5}$ Ē

```
linear EST 05-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  602916168F1 NCT CAR Lo29 Mas abosed tos CDNA clone IMAGE, 5066737 51,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mammalia: Eutheria: Rodentia: Sciuroquathi: Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; chordata; Graniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                96 LysthuleuTrpftlyllefysflePhelleAlaAlaValAspLeuAspftluMetSerPhe 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 116 threhethretutenethisksantlestutteservallistysphepheamteuteu 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         401 ACTITITACTEGACCTACAGAANACCATAGAAACCAGTGTCTATAAATTCTTTGACTTATTA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  136 13801011eAspthrSerTbrt38ValAspAsnAlaMetSerArgLeotentystys135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         159. AspVallzeuPheAladzeuPheSerEysLeuGluArqThtCysGludzeuTleTyrLeuThr 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421 AATGESTTALGEGAGEGAGSANALIAGAAGGGAGGIGAAGTTALALATEGAGA 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              dinfroserserserseriteSerthrGluffeAsnSerAlaLeuValLeuLysValSer1rp 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481 CAACCAGCAGTGCGTTATCTACTGAAATAAATTCTATGTTGGTGCTAANAATTTCTTGG 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     196 HethrehetzenzenAlatysGlyGluValtzenGluMetGluAspAspLeuValHeSer 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            216 PhotlinLeumetLeucysValLeuAspTyrPheIleLysLeuSerProProMetLeuLeu 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 GAATTTATTGGATTATGTCAAAAGTTAAAGGTACCGATCATGTCAGAAAAAGAGCTTGG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                               % Asperter Arala Loneyse Transporter (Asperta Valar qG Luar qAlatrp 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26 Lenthr ErpolutysValiserSerValAspolyValLeuGlyGlyTyr11cGlntysLys 95
                                    1. Physhogonaeon physhogonaeon contractor contactant and the formal contractor of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first physhologon of the first phys
                                                                                                                                                                    46 AspSerGlyProGluAspLeuProLeuValArqLeuGluPheGluGluThrGluGluPro 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: eqapts remail.mih.gov
Dissue Procurement: Gilbert Smith, Ph.D.
cDNA Library Preparation: Lite Rechnologies, Inc.
cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
INKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7.46. bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     l (bases 1 to 736)
NIH MGC http://mgc nev tib ges/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RE151568.1 - 01:14611569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       236 LyselluProlyrigs 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              658 CAGAGGGATAGAAA 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     H1151568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         низия
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NELLINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                - FetANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ANTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PESTEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEFFIKEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JUNIONAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERNIEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SHOOL
```

ĩ

5

Š

5 == $\frac{1}{2}$

row: p column: 02

http://image.llnl.gov Plate: ii.AMll179 row:

```
Znote-"Organ: long: Vector: pCMV Swikts; Site_1: Sall:
Site_2: Not!; Cloned unidirectionally. Primer: Olido di.
Library Constructed by Life Technologies. Investigator
providing samples: Gilbert Smith, NHH."
                                                                                                                                                                                                                                                                                                           /tissue_type—"spontaneous tumor, metastatic to mammary.
Stem cell origin."
/lab_host="bH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661 AspteulysPheLysTletleValThrAlaTyrLysAspLeubroHisAlaValGInGlu 680 HTHTHTHTHTHTHTHTHTHTHTHTHTHTHTH HTHTH HTHTH HTHTH HTHTH HTHTH HTHTH HTH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721 ThrLeuSerProlleProHisIleProArqSerProTyrLysPheProSerSerProLeu 740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                581 ThrPheLysArqValLeulleLysGluGluGluTyrAspSerIleIleValPheTyrAsn 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63 ACCTITAAACGTGTTTTGATCAGAGAAGAGGAGTTTGATTGCATTTATAGTATTCTATAAC 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        701 SerValPheMetClnArgiculySThrAsnileLeuGlnlyrAlaSerThrArgiroPro 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        123 TCCSTITICATGGAGAGIAAAAAAAAAIAIIIIAGAGIA1GGGGGGGAGAGGCTGGI 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            761 GlyteuProThrProThrTysMetThrProArgSerArgHelauValSer1Les1yGlu 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    781 SerPheGlyThrSerGluLysPheGluLysIleAsnGluMetValCysAsuSerAspArq 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361 ICATIFGGACATCTGAGAAGTTGAGAAATAAAGGAGGGGGGGGAAATGAGAGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    801 ValleuLysArgSerAlaGluGlySerAsuProProLysProLeuLysLysLeuArgPhe 820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42] AspileGluClySerAspGlaAlaAspGlyGertysHiskadruClyCluGelySPhe 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           841 GindinLysLeaAlaGlaMetThrSerThrArqThrArqMetGlnLysGlnLysMetAsn 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       803 GOLGLGCGAACACCAA - - AAAA LGACLCGGAGA LCAAGAA LCI LGAA LCAATTGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 174.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches:
                                                                                                                                                                                                                                                                             /clone_lib="NC1_CGAP_Lu29"
                                                                                                                      /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-026-459A-49 (1-871) x BI151568 (1-746)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         861 AspserMetAspThrSerAsuLysGluGlu 870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         599 GAGAGCAAGGATGTCTCAAACAAGGAGGAA 6.28
                                                                                                                                                                                             /db_xret="taxon:10090"
/clone="!MAGE:5066737"
High quality sequence stop: 717.
                                          Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          156 q
                                                                                                                                                            /strain-"CZECH II"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      179 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            962.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96,198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94.81%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21.40%
                                                                                7 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                    Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NO.
                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ô
```

Search completed: January 19, 2003, 05:07:26 Tob time : 1939.01 secs

Copyright (c) 1993 / 2003 Compugen Ltd. GenCore version 5.1.3

nucleic search, using trame_plus_p2n model missions w

January 17, 2003, 18:27:24 ; Search time 1922.51 Seconds

(without alignments) 7320,587 Million cell updates/sec

1 MPPKTPRKTAATAAAAAAEP.....TRMQKQKMNDSMDTSNKEEK 869 Perfect Score: Sequence:

Xqapop 10.0 , Xqapoxt Yqapop 10.0 , Yqapext Fqdpop 6.0 , Fqapext Delop 6.0 , Delext HLOSUM62 Scoring table:

16154066 seqs, 809774335 residues

12 1081 12 lotal number of hits satistying chosen parameters:

Maximum DB seq length: 2000000000 Minimum DB seq length: 0

Listing lirst 45 summaries rost processing: Minimum Match 0% Maximum Match 100%

FS1 : • batabase

em_qss_inv:* em dss hum:* em_estium:* em_eston.:• om esthum:* em estin:* qb_est2:* qb_hte:* om estba:* em estro:* em_hte:* qb_est4;* em estpi:* qb est 4:* **.**: THUU S → UD-+ #:vots+ m↔ qb est 1:* dp_dss:

em dass mam: • em dass mus: • em gass ofher: • em das _pro: • em dss pin:* em qss lun:∗

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

			æ				
Res	Result. No.	Score	Query Match	Lengt h	5 3	110	beset iption
		3 3631	1 1 1 1				
	c	0.000			- :	7	
	۷.		٠. ج			EXC.	
	٠.,	0.2/2T	97 (20 (74 (- 4 .	FO220275	BULLEGITS AGENCIORI
	4.1	1254		127	÷.	AL547811	$\hat{\Box}$
	ın	1208	9 4 4	æ ₩		ISM45 47.24	EM45.47.24 AGENOLORI
	9	1111	24.7	1024		HM450011	HM450031 ACENCODEL
Ü	7	1056.5		914		AA763411	
	ထ	1047	2 4.0	605	÷	AL599643	DKEZD 4.1
ς,	5	1043	6.27	766	Ĵ	AL563252	ALSe 471.7 ALSE 4757
٥	01	1040	22.9	694	9	BE082846	-
	11	1016	22.6		10	AW58 + 181	AWSHALK) Lallback
5	7.	1013	22.5	23		AA763485	
	~	1001	 C	0.00		HCD5 45.43	807 F38 COURT 1 100 F38 COURT
	4	6 355		1001	-	HMA 756113	CALLONAL OF COMM
	· ·	37.0		- a a a		AW 36.80 1.40	
	1 -	0.75	4.5	97.6		10 700 WV	
	c -	706	7 7	3 - 7	× :	MILOLDES	
	1	606	7	7 6.0	7	AV / 15544	
	œ —	955	21.2	584	12	RG149050	
	5	947.5	21.0	2.44	1.5	HF144857	HF144857 601790343
	30	935	20.8	5 34	5	AL692790	
	ី	806	20.2	is.	1.0	BE5 49278	1855-89278-60106-8567
	(1 (1	894		088			
	8	068	19.8			BM802736	
	24	C X	- G	0.00	, ,	A: 12044)	
	ري د د د	874.5	. c	7.34		- 1 C C I C I	2012 (10 th) 1 th (12 th)
	` -			- U		10.00 0 TO 10.00	
¢	9 0	0.00		0.000	• -	28.5±4.00 55.00 10 46	
9 (- a	0.0	1.7.1	- F	1-	BE331236	
ز	9 0	# ur	. 0	# 4 F 4	7 -	DE100035	TSOUNT ADD CROSSING
	40	5) ^ # 3 • •	٦-	574-30-4-10 And 0-0-00-3	
	2.5	+ a	0 0	: : + 0	- 3	AW (0.000)	AW CERT OF THE BNO
	- 2	0 4	1.0	4 0	٠.:	A 104 00 100	A1645U38 VW3431U.X
	1 7	•	0 6	4 7 4	• -	111111111111	AAGOSTA MINITERIOR T
		700	0 · / T	# 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-	D1 50 5 9 5 7	Service of the servic
	# L	7 0	# · · · ·	6007	· .	ISM406/28	KM4 SE/ZB AGENCOURT
	Ç.	04.0	7 0	6 T 2	٠.	AA959836	VW:41101
	2 !	007	ρ. 	50/	·	A16460'97	/0454WV
	,		16.7		_	AW504514	AWSOASIA UL HE HNO
	æ T	703.5	15.6	472	5	AA955457	AA955457 UL R AL c
	φ T	691	15.3	514	15	BF418684	BF418684 UI R BJ2
Ü	4 0	œ.		4	~7	BF827047	BI'827047 Re'4 HNen2
	4 1	681.5	15.1		14	CB2304	CB2304 CB2304 Leuk
	4.2	929	15.0		10	HE692220	B15692220 ut 25c04.x
	4 3	667	14.8	651	-	H1696841	B169684] 6033444967
	44	659		180	0	AW951604	
	45	6 5 4	14.1	425	0	BE285796	BE285796 601096510

ALLCINENIS

DEFINITION RESULT 1 AK011246 LOCUS

HTC 19 JAN 2002 AK011246 HTC 19 JAN 20 MENA linear HTC 19 JAN 20 Mes muscellus 10 days emtryc whole body ctna, FIEEN 1011 length enriched library, cione;2600017M22;retihoblastoma L full insert sodnence.

AKOIL146.1 GI:12847243 HTC; CAP trapper. VERSION KEYWORDS SOURCE ACCESSION

Mus muserdus (strain:057BL/6J) 18 days embryo cDNA to mRNA, clone_lib:RTKEN full length enriched mouse cDNA library clone:2600017M22.

Mus musculus ORGANISM

Mammalia, Eutheria, Rodentia, Sciuroquathi, Muridae, Murinae, Mus Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,

```
Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HOSI: SOLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       404 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
                                    MV: VM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     řcd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .î
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ं
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E 5 (bases 1 to 1964)

S. Machi, J., Alawar K., Akahira, S., Akimura, T., Anno, H., Arai, A.,

Anakawa, T., Baldarelli, R., Bono, H., Brownstein, M., Bult, C.,

Carninci, D., Fukuda, S., Fukunishi, Y., Furuno, M., Hanaqaki, T.,

Hara, A., Hayarsu, N., Hill, D., Hiramoto, K., Hiracka, T., Hori, F.,

Hume, D., Imolani, K., Ishii, Y., Irama, M., Izawa, M., Kasukawa, T.,

Kato, H., Kawai, J., Kojima, Y., Konoo, H., Konda, M., Koya, S.,

Kurhhara, C., Matsuyama, T., Miyaraki, A., Nishi, K., Nomera, K.,

Numazaki, E., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Ouackenbsh, J.,

Salto, H., Salto, K., Sakai, C., Sakai, K., Sano, H., Sasaki, D.,

Schrim, L., Shibata, K., Shibata, Y., Shinaqawa, A., Tahanaki, T.,

Tanaka, T., Telima, Y., Toya, T., Yamamura, T., Yamanaka, I.,

Yasanishi, A., Yoshida, K., Yoshino, M., Miramatsu, M., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S. Kawai, J., Shinaqawa, A., Shibata, K., Yoshino, M., Hoh, M., Tshii, Y., Arakawa, E., Hara, A., Fukurishi, Y., Konno, H., Adachi, J., Fakuda, S., Alawa, K., Hara, M., Nishi, K., Kiyosawa, H., Kondo, S., Yamanaka, I., Saito, I., Okazaki, Y., Gobori, T., Bono, H., Kasukawa, T., Saito, R., Kadota, K., Matsuda, H., Ashburner, M., Batalov, S., Casavant, T., Fleischmann, W., Gasterland, T., Gissi, C., King, B., Kochiwa, H., Kuehl, P., Lewis, S., Matsuo, Y., Nikaido, I., Pesole, G., King, B., Waqner, L., Washio, T., Sakai, K., Okido, T., Furuno, M., Aono, H., Haldarchi, K., Batshid, C., Hake, D., Boffelli, D., Holymay, M., Garninci, P., de Bonaldo, M.F., Brownstein, M.J., Bult, C., Fletcher, C., Fujita, M., Gariboldi, M., Guslincich, S., Bill, D., Holymann, M., Hume, D.A., Kamiya, M., Lee, N. H., Lyons, P.
                                                                                                                                                                                                                                     Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramaisu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNns to prepare tull-length cDNn libraries for rapid discovery of new genes census Res. 10 (10), 1617–1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               marchionni, Mashima, J., Mazzari, L., Lyuns, Eyuns, F., Rondone, F., Rind, H., Ringwald, M., Rodriguez, I., Sakamoto, N., Sasaki, H., Sato, K., Schonbach, C., Seya, T., Shibata, Y., Storch, K. F., Suruki, H., Toyo-ka, K., Wang, K. H., Welitz, C., Whittaker, C., Wilming, L., Mynshaw Boris, A., Yoshida, K., Hasseqawa, Y., Rawaji, H., Kohtsuki, S., and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Kornos, H., Akiyama, T., Nashiro, H., Itoh, M., Sumanoto, S., Hazama, M., Nishino, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Yanamoto, R., Matsumoto, R., Tawa, M., Ohara, F. Washiwagi, K., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsumua, S., Kawai, J., Cekazaki, Y., Muramatsu, M., Inoue, Y., Kira, A., and Hayashizaki, Y., Sequencing Pipelin, Will 384 muliyasi (PISA) system 384 inchai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (PTKEN), Laboratory for Genome Exploration Research Grow, RIKEN Genomic Sciences Center (6SC), RIFEN Yokobama Institute: 1-7-22 Stabiro-cho Tranumi-ku, Yokohama, Kanagawa 230 0045, Japan (E-mail.genome-resides.tikeh.go.jp, URL:http://gronmc.gsc.riken.go.jp,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Functional annotation of a full-length mouse cDNA collection
Mature 409 (6821), 685-690 (2001)
                                                                     High-etticiency tull-length cDNA cloning
                                                                                           Meth. Enzymol. 303, 19-44 (1999)
                                Carrier in and Hapaghiraki v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21085660
                                                                                                                                                                           10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11076861
                                                                                                                                                                                                                                                                                                                                                                                                                20499374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11217851
                                                                                                                                                                                                                                                                                                                                                                                                                                                        11042159
                                    AUTH RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LISTE
J. OBRNAL
KEELKENCE
                                                                                                     JAHLEN AL
                                                                                                                                      MELALINE
                                                                                                                                                                           PURMED
                                                                                                                                                                                                           KENEKERGE
                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                   JUNEAR DOLL
                                                                                                                                                                                                                                                                                                                                                                                                                       MEDULINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTH RS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        D. STERNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEFEKEN. E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REPERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J. G.KNAL
                                                                     TITLE
                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (111 E
```

```
prepare mouse tissues. First strand cobbs was primed with a primer for invalvantabounds. First strand cobbs was primed with a primer prepared by using tichluse thermo-activated reverse transcriptase and subsequently enriched for Intl-lendth by captrapper. Second strand subsequently enriched for Intl-lendth by captrapper. Second Strand chark was prepared with the primer adapter of sequence [5] dandardconcaptrapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /close _recest/Mill
/close_itb="KikkN full length enriched mouse cDNA library"
// Covertage="10 days embryo"
// .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ÉTEEPFFTAL GYKLKVPPHVPEPAMLTWEKVSSVIGILEGY LÄKKELMGJOTPTAAV
DLDEMPFTFTELGKSIETSVYKFFDLLKEIDTSTKVDNAMSKLLKKYNVLCALYSKLE
PTCELIYLTQPSSALSTEINSMLVLKISWITFLLAKGEVLGMEDDLVISFQLMLGVVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="MGD:MG1:97874"
/translation="MPPKAPRRAAAAPPPPPPPPPPPPPPPAGDSGPEELPLARLEFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YETKESPFALLALIVALAALI 1953PELPERGÖNESAAJAAGI LINDLELLEUUGEHE
CHIDEVKNVYEKNPLPELNSLGTVSSNGLPEVESLSKRYEEVYLKNKDLDARLELDHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KTILGTOP LOSFETERT FRENNPOEDANVYT FRENKT VMNT 1001.MV 11.NSASDQPSE
                                                                                                                                                                                  cDNA library was prepared and sequenced in Mouse Genome
Encyclopedia Froject of Genome Exportation Essential Story in Filter
Genomic Sciences Senter and Serome Science Laboratory in RIREA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cose wish and site (hilf ) go an general \{i,j\}_{i} ) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      193 CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  253 GARTIGHTOFFIGGETERGETERGARANAMITGANGEGRATITATEGATITA 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21 Fr. Allafra Prof. ref. ref. ref. ref. ref. adoase residentials regulation and the title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MetFroFroLysThrFroArgLysThrAlaAlaThrAlaAlaAlaAlaAlaAlaGluPro 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41 AsplicuProLeuValArgLeuGluPheGluGluThrGluGluProAspPheThrAlaLeu 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 OysolntysLeutystlePriAspHisValArqGluArgAlaTrpLeuThrTrpSlutys 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zaote "data source.MGD, seutee keg.MG1.97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      db_xrcf-"FANTOM_DB:2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismutches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         346 t.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="MGD:MGI:1905250"
/db_xret="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Inders:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /pretein_id-"BAB27493.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-026-459A-47 (1-869) x AK#11246 (1-1364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref-"G1:12847244"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         307 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /strain-"C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NLISYFNNCTVNP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /codon_start.-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      evidence: 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.44e-142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /gene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1575.50
80.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /qene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   306 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           35.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .1364
```

35 G	18 47.4	Valserservalaspelyvattandlydlytyrttechntystystystystusetty Ettlettettetten ett ettlettetten GTTPCATAGGGGGGAACGTGGAAGGAAATTCAAAAGAAGAACTCTGGGGC	100
5 3	101	101 The grid pherical and a Valaspie was polumet ser Pherhr Pherhr Gluieu 120 H. J. H. H. H. H. H. H. H. H. H. H. H. H. H.	120 492
5 5	121	GERTAGRANGETT OF STREET PRINCES FROM THE STREET OF THE HILLER HILLER THE STREET THE STREET PROPERTY OF THE STREET	140 552
5 3	141	Ser Thillillillillillillillillillillillillill	160 612
5 2	16.1	Louthesertystaudlukrethreyscluteulletyrtzeuthrchuproserser 111 :: HTHTHTHTHTHTHTHTHTHTHTHTHHTHHTHHTHHTHTH eteneoraantagarcoadgidioaachtalatatritgacacaacacagagggg	180 672
\$	181	100	181
Ē	6.7.4	TIALTIACTGAAATAAATECTATGTTGGTGGTAAAAATETGETGGATGACTTETTTACTA	732
5	<u>E</u>		181
Ē	7 4 4	GCTAAAGGAGAAGTATTAGAGATGGAAGATGAGCTGGTAATGTGCATTTCAGGTAATGTTG	792
ωŸ	<u>x</u>		181
à.	7.4.4	TOTOTAGE GACTATITATTAAGTTOTOGGOOGGOOTAGTTAGTAGAGAAAA	852
5 G	182	VaTALaVaTTLeProTTeAsinGTySerPrivArgThrProArgArgSTySLbAsinArgSEr 	201
67 126	202	ALAARTI LOATALYSO III.OOGI UASIIASPI BLARGI LOLLOGI UVATLOUTYSLYSO LU 	221 · 972
5 G	777	HESTINGSASCH GASPOTOTH SSSCOTTFTHOUGSSSIPELIEFIOPEMACE FILLITH HITTELLEFIOPEMACE CAGASTICASTAGE FILLITH HITTELLEFICE FILLITH HITTELLEFICE FILLITH HITTELLEFICE FILLITH GASTORATATA	241 1032
5 3	242	AsirSerfa-uGlyta-uValThrSerAsinGlyta-uProGluValGluAsira-uSerEysArq 	261 1092
75 dg	262	Profred to the the term by SASE to ASPATABAT gloup betweep HILL HILL	281 1152
0.7 10 10 10 10 10 10 10 10 10 10 10 10 10	282 1153	LysthilaudInthraspserticaspserPhediuthrdinargthrepoargiysser 	301
\$ <u>\$</u>	402	Asnizendaspidi udai Asna al Hille Pro Pro Histhr Pro Valar of thru Val Metasn Hill	321 1272
55	122	The Healing inclination of the Legistral ascraspoling to Serginas in Hill Hill Hill Hill Hill Hill Hill H	341 1332
25 67	14.2	HeserTyrPheashashcysThrValash 351 HTHTHTHTHTHTHTHTHTH ALHOCIACTICAATACTGCACGGAAT 1362	
PESO BMS6	SOLE 2 4561083 actos	HMPGGTORs 1051 bb mRNA linear EST 20	- FER - 2002

```
Homo sapiens
Eukaryota; Metazoa; Chordata: Craniata: Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhibi; Hominidae; Homo,
                                                                                                                       1 (bases 1 to 1051)
NIH MOS http://web.noin.h.pogr.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                        cDNA Library Preparation: Lite Technologies, Inc. cDNA Library Arrayed by: The 1.M.A.G.E. Consortium (LLNL) NA Sequencing by: Agencourt Rioscience Corporation (Clone distribution. MSC clone distribution information can be found through the 1.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            374 AlavalGlyGlnGlyCysValGlulleGlySerGlnArgTyrLysLeuGlyValArgLeu 393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     394 TyrTyrArgValMetGluSerMetLeuLysSerGluGluGluArgLeuSerIleGluAsn 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64 TATTACCGAGLAATGGAATCCATGATTAAATCAGAAGAAGGATTALCCATTCAAAAT 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   434 ValValMetAlaThrTyrSerArqSerThrSerGlnAsnLeuAspSerG.yThrAspLeu 453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 454 SerPheProTrp11eLeuAsnValLeuAsnLeuLysAlaPheAspFheTy11,ysVal111e 473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                     Plate: LLAM12263 row: m column: 18
High quality sequence stop: 737.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-026-459A-47 (1-869) x BM561083 (1-1051)
                                                                                                                                                                                                                                                                                                                                                                                                      /ordanism-"Homo sapiens"
                                                                                                                                                                                            Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone_lib-"NIH_MGG_67"
                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref-"taxon:9606"
/clone-"IMAGE:5550905"
                                                                                                                                                                                                          Email: cqapbs-ramail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                      Location/Qualitiers
5', mKNA sequence.
HM561083
BM561083.1 GI:18806043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.416-140
1551.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93.20%
91.50%
34.45%
                                                                                                                                                                           Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                      1001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity,
Best Local Similarity;
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 330 a
                                                                 human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                       sonree
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                               ORGANISM
                                                                                                                                               AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HASE COUNT
                ACCESSION
                                               KEYWORDS
SOURCE
                                                                                                                            REFERENCE
                                                                                                                                                                           JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                      PEATURES
                                 VERSION
                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CRICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
```

494 CysGluHisArglleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeu 513

ò

1051 bp mRNA linear EST 20-FEB-2002 DEFINITION AGENCIONE, 6566133 NIH_MGG_67 Home sapiens conditione IMAGE:5550905

BM561083

```
/tissuc_type="embryonal carcinoma, cell line"
//lab.bost="DH10b (phage-resistant)"
//note="Organ: testis: Vector: pCMV-SFORT6, Site_1: NotI:
Site_2: Sali: Cloned unidirectionally: oligo-dT primed.
Average insert size 2.5 kb. Library enriched for
full-length clones and constructed by Life Technologies.
Note: this is a NH_MGC library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    42 TSTSTCTTGACTATITIATIAAAGIGIGAGGGGGATGIIGGIGAAAGAAGAACATATAAA 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  282 ANTICTOTORGACTIGIAACAICTAAIGGACTICCAGAGGIIGAAAAICIIIGIAAACGA 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               262 TyroluGluileTyrLeuLysAsnLysAspLeuAspAlaArgLeuPheleuAppHisAsp 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       342 lleSerTyrPheAsaAsaCysThrValAsaFroLycGluSerIleLeuLysArqValiys 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        582 ATTICCTATITAACAACTGCAAGTGAATGCAAAAGAAGTATACTGAAAAGAGTGAAG 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    382 IlediyserdinArqT,iL;sLeaC;;ValArqLeaTyrT;rArqValMetGluSerMet 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      202 AlaArgileAla.ysGlnLeuGluAscAspThrArjileileGluValLeuGysLysGlu 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ::? HisGlaCysAsmlleAspGlaValLysAsmValTyrPheLysAsmPheIleProPheMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              282 tysThrLouflcThrAspSerIleAspSerPheGluThrGlnArqThrProArqLysSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            lh9 CyscluLeuIleTyrLeuThrGlnProSerSerSerMetVal------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches:
/db_xrei-"taxon:9606"
/cione "imAGE:6044522"
/cione_lib-"NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-U9-U26-459A-47 ()-869) x HQ220275 (1-881)
                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.460-114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1278.50
93.24%
93.17%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28.40%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity.
                                                                                                                                                                                                                                                                                                                              313 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                 Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                              HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š.
                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>بعر</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ت
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        긤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HQ22-075
AGENYOUPI_7572£21 MIH_MG2_92 Hemo sapions cDMA clone IMAGE:6044522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo saptens
Eukaryota: Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates: Catarrhini; Hominidae; Homo.
                                                                                         5.44 AsnLeuProLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerProValArqSer 553
                                                                                                                                                                                                                                                             664 IGIGAACATCGAATCATGAAATCCCTTGCATGGCRCVFCAGATTCACTTTATTTGATCTT 423
                                                                                                                                                                                                                                                                                                                                                             9.4 ProlyslystystystlyserthrthrArqValAsnSerthrAlaAsnAlaGluthrGlnAla 573
                                                                                                                                                                                                                                                                                                                                                                                            574 ThrSerAlaPhoGluthrGlutysProLeutysSerThrSerLeuSerLeuPheTyrLys 593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94 LysValTyrArqLeaAlaTyrLeaArqLeaAsnThrLeuCysGluArqLeuLeuSerGlu 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6.44 GludeunetaryaspargHisledaspGlullemetMetCysScrmetWyfGly11eCys 653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      654 TysValtysAsntleAsp-LettysPhetystletleValThrAlaTyrLysAspLettPr 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 881)
NIH-MGC http://mgc.nci.uih.gov/.
National Ingritutes of Health, Wammalian Gene Cellootion (MCC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Clone distribution: MsC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: Plate: LLAM18287 row: e_column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6.93 \pm 110 \pm 140 \pm 9.93 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.04 \pm 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDNA Library Preparation. Life Technologies, Inc. CDNA Library Arrayod by: The Limia of P. Consertium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA Sequencing by: Agencourt Bloscience Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999)
Contact: Robert Strausherg, Ph.D.
Emall: cqapbs-remail.uih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  High quality sequence stop: 690. Location/Oualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ220275.1 GT:20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           wantes VNam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Інитап.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NEETINITESIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            - KCAN1SM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ALLERIAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11.15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MMEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20,50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \bar{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à;
                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                                             Ś
```

```
824 AspClu 825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            722 CAIGAA 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NOTTINIAGO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BM454724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SECT
                                                                         £
                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                       õ
                                                                                                               ô
                                                                                                                                                a
                                                                                                                                                                                        ò
                                                                                                                                                                                                                            43
                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                    EST 14-AUG-2001

    (bases 1 to 727)
    Poustka,A., Wellenreuther,R., Mewes,H.W., Weil,R. and Wiemann,S.).
    EST (Poustka,A., Wellenrouther,P., Mewes,P.W., Weil,R. and Wiemann

                                                                                                                                                                                                                                                                                  Homo sapiens
Enkaryota; Metazoa: Chordata: Craniala; Vertebrata; Enteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Research Center (UKF2): Email s.wiemannadktz heidelberg.de, sequenced by DKFZ (German Cancer Research Center, Heidelberg/Germany) within the cDNA sequencing consortium of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zustos "Vector: pTriplEx2; Sile_1: SlifA: Site_2: SliIB: cDNA collection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No sl sequence available.
This clone (DKFZp4190816) is available at the KZPD in Berlin.
Please contact the KZPD: Ressourcenzentrum, Heubnerweg 6, 14059
Herlin Charlottenburg, GERMANY; Email: clone4rzpd.de.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 684 LysserthrserteusertæuthetyrtystysVallyrArgteuAlatyrtæuArgteu 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           604 AshThrlewCysGluArqDeuLeuSerGluHisPreGluLeuGluHisIleIleIrpThr 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6.24 LeaphealmHisThrLeadlnAsndluTyrdluLeuMetArqAspArqHisLeuAspGln 64.3
76.2 CTTAAATCAGAAAAAAAGAGATTATCGATTGAAATTTTAGGAAAGTTGTGAATGAGGAG - 823
                                 LOFUS ALSGFB1 727 bp mMNA linear EST 14-AUG
LEFINITION DKEZp31500B16,11 813 (synonym: blee2) Homo sapiens cDNA clone
LAEZp3180B16 5', mKNA Sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Z AAA POTACO FOTEUTTOACH GIFTTA FAAAAAA GTOTA FOGGOTAGOOTATO COGGOTA 61
                                                                                                                                                                                                                                                                                                                       Mammalia; Entheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Max Planck Institute for Molecular Genetics
Throstrasse 73, 14195 Berlin, Germany
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: poustka@mpimerberlin-dahlem.mpg.de
This is the 5' sequence of the clone insert.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zeloho libe"414 (synowyme bloc2)"
Zdov stago:"admit"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 130 q 198 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      indets:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            38 09 026 459A 47 (1 869) x ALS97811 (1-727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zelone-"DKFZp31300816"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /lab host "pH10B"
                                                                                                                                                                                                      AL597811.1 GI:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.19e 111
1254.00
99.59%
                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Poustka A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 German Genome Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              +49-30-84131624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fax: +49 30-84131128
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Department Lehrach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . [5]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                865.66
                                                                                                                                                                                                                                                                                                                                                                                                                   (npublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27.85%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bost Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Airquitent Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Querry Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Source
                                                                                                                                                                                                                                                                                  ORCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASS COUNT
                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ź
                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                   Full RNA1.
                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                               ALS97811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                           RESULT 4
                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                             111.8
                                                                                                                                                                                                                                                                                                                                                                                                                                     . MME:NI
                                                                                                                                                                                                                                                                  Y. 24 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7
                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ã
```

```
MERNA TIMPAR RNT 05-FIRB 2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8.45 Ep. BENA LINCAR EST OFFICES CONA COLOR DAMES 5.2 PRINT SOURCES CONA COLOR DAMES 5.2 PRINT SOURCE CONA COLOR DAMES 5.2 PRINT SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

    (bases 1 to 835)

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  704 Arqueulys Phrash Helleud Intyral aser than appoint the tensor Profile 724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              744 AshilleTyrilleSerProteuLysSerProtytLysilleSerCluGlyteuProthuPro 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        482 AACATCTATATTTCACCCCTGAAGAGTCCATATAAAATTTCAGAAAGGTCTGCCAACACCA 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            542 ACAAAAATGAGTGCAAGATGAAGATGTTAGTATGAATTGGTGAATGATGGGGAAGTGT 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   784 GluLysPheGlnLysIleAsnGlnMetValCysAsnSerAspArqValLeuLysArqSer 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HITTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       804 AlaGluGlySerAshProProProLysProLeutysLysLeuArgPheAspilleGluGlySer 823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammadian Gene Collection (MGP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Clone distribution: MGC clone distribution information can be
122 (T1116AASCACASOGS)SCASAATGAGTATGAACTCATAASAGACATTGGACOA 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA Library Preparation. Life Technologies, Inc. CONA Library Arrayed by: The L.M.A.G.E. Consortions (LINE) DNA Sequencing by: Agencourt Bioscience Corporation
                                                                                                                                                                                                                                                                                                                                                                    684 LeutletyschuchdhulyrAspSerfletteValPhetyrAsnserValPheMetGlin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               764 ThriysMetThrProArdSerArgileLeuValSerileGlyGluSerPleClyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 found through the L.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plate: LLAM12206 row: e column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tissue Procurement: ATCC/DCTD/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/db_xret="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              High quality sequence stop: 647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cqapbs-romail.nih.qov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BM453724.1 GI:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
```

```
491 LeugluArqCysGluHisArqIleMetGluSerLeuAlaTrpLeuSerAspSerProLeu 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            [4] PheAspleulleLysClnSerLysAspArgCluClyProThrAspHisLcuCluSerAla 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             131 CysterologasalagorolagoldasaasaHisThrAlaAlaAspMetTyrikuSetPto 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          691 PhetyrtystysValTyrArdfouAlafyrfouAngrouAssibriogogsofiangtou 610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               511 LeuserGlaHisProGluLeuGluHisIleIleTrpThrLeuPheGlnHisThrLeuGln 630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A31 AsnGlufyrClufouMetArgAspArgHisLouAspClnIicMetMetCysSerMetTyr 650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              651 GlyttechstaysValupsAsiilicAsplicabysiheipsiletleValThrAlaTyrLys 670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         67] AspLeuProHisAlaValGlnGlnThrPheLysArqValLeuIleLysGluGluTyr 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (9) AspSetfleTleValPheTyrAsnSerValPheMetGlnArgLeUJySThrAsnIleLeu 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CONTROLLEMENT CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ** IIIGAICTIATIAAACAAFGAAFGAGAGGGAGGAAGTGAACTGATGAATGTGGT 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                188 GTAAGAPCTCCAAAGAAAAGGTPCAACTACGCGTGTAAAFPCFACFGCAAAFGCAGAG 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   428 AAISAGIAIGAACTCAIGAGAGAGAGAGTIIIGGACCAAATTAIGAIGIITCCAIGIAI 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  548 GATCLECTCAEGEGETETEGGGGGGGGTEGAAGGTGFFFFGAFGAAGAGAGGGGTAF 607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  711 SiniyralaSerThrArgProPro---ThrLeuSerProlleProHislle-ProArgSe 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               568 PAGLALUCTIFICACCAGGGGGGGGGTTAGTCACCAANTAGGTGACATTTGGTGGAAG 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29 rProTyrLys · PheProSerSerProLeu · ArqIlePro---GlyGlyAsn----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /lab_host-"DH10B (phage-resistant)"
                                                                                  //issue_type="melandio melanoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              [ndels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
                                  /clone_lib-"NIH_MGC_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UM 626-459A-47 (1-869) X BM453724 (1-835)
/clone-"lMAGE:5528814"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.390-107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1208.00
92.91%
91.04%
26.83%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Lucal Similarity:
                                                                                                                                                                                                                                                                                                                                       ದ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Corety Materia
                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Trod. No.:
                                                                                                                                                                                                                                                                                                                                                                              RISIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    >.
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ξ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>></u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    夸
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               â
```

```
/Lissue_type-"meldiotic meldiouma"
/lab_host="DH10B (phage-resistant)"
/note="Organ: skin; Vector: pCMV-SPORT6; Site_1: Not1:
/note="Organ: skin; Vector: pCMV-SPORT6; Site_1: Not1:
/note="Organ: skin; Vector: pCMV-SPORT6; Site_1: Not1:
/note="Organ: skin; Vector: pcmv-resister; Olido dT.
/note="Organ: skin; Vector: library constructed by inferenchologies."
                                                                                                                                                                                                                                                                                          Eukaryola, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA Library Preparation: Life reconclogies, Inc. cDNA Library Arrayed by: The L.M.A.G.F. Consortium (LLNL) BNA Sequencing by. Agencourt Bioscience Corporation Clone distribution: MGC clone distribution can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             673
                                                                                                                                                                                                                                                                                                                                                                           National Institutes of Health, Mammalian Gene Collection (MSC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          694 IleValPheTyrAsnSerValPheMetGlnArqLeuLysThrAsnIleLeuGlnTyrAla 713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            714 SerThrArqProProThrLeuSerProlleProHisIleProArqSerProTyrLysPhe 733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              734 ProSerSerProLeuArg11eProGlyG17AsnileTyr11eSerProLeu1ysSertro 753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 AAAGTGAAGAATATAGACCTTAAATTCAAAATGATTGTAAGAGGATAGAAGGATGTTGGT 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         654 LysValLysAsnileAspLedLysPheLysileIleValThrAlaTyrLysAspLeDPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      674 HisalaValCinCluThrPheLysArgValLeulleLysCluCluTyrAspSerfic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        found through the I.M.A.G.E. Consortium/LENL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1023
216
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         281 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: cqapbs-r@mail.nih.qov
Tissue Procurement: AICU/INID/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "organism "Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-026-459A-47 (1-869) x BM450031 (1-1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="NIH_MGC_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        High quality sequence stop: 643.
                                                                                                                                                                                                                                                                                                                                                    NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:9606"
/clonc="IMAGE:5528037"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       197 g
745 HieffyrlleSerProLeutys 751
                                           788 TATATTTTCAACCCCCTGGAA 809
                                                                                                                                                                                                          BM450031.1 GI:18499071
                                                                                                                                                                                                                                                                                                                                (bases 1 to 1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.64c 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1111.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         211 c
                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24.688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .1023
                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         334 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                     human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aliqument Scores:
                                                                                                                                                                                                                                  į
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNT
                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                             KEYWORDS
                                                                                 RESULT 6
                                                                                                       BM450031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score:
                                                                                                                          SOCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ωþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
```

```
1 (bases 1 to 914)
Marra_M., Hiller.L., Allen.M., Bowles.M., Districh.N., Dubuque.T.,
Geisel.S., Kucaba.L., Lacy,M., Le.M., Martin.J., Morris.M.,
Schellenberg,K., Steplew,M., Tan,F., Hiderwesk,K., Mosre,B.,
Theising,B., Mylie,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Applied Tissue from a lactating temperal with a mediliad polylinker; lst strand cDNA was prepared from mammary gland tissue from a lactating temple, and was then primed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mammalia; Butheria; Rodentia; Sciuroquathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   vw54a04.1) Sources mannmary_gland_NMLMG Mus musculus chwa clone
hMade: 147594 5 similar to qb.M|5400 RETINOBLASIOMA-ASSOCIATED
FROTEIN (HIMAN); qb.M26.93 Mouse relinoblasiona susceptibility
profeto (McGSE); mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This clone is available royalty free through LLNL; contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IMAGE Cousortium (intomimage.llnl.gov) for turther information.
THEFTER THE THEFT THE THEFTER THEFTER THEFTER THE ACCOUGANGE AND A 24.2 OFTER GENERAL CASC THAT THE THEFTER ACCOUGANGE AND A 20.1 ACCOURT.
                                                                                                                                                                     814 LystysteuArgPheAspIleGluGlySerAspGluAlaAspGlySerLysHisLeuPro 833
                                                                         754 TyrLysTleSerGluGlyLeuFroThrProThrLysMetThrProArqSerArgIleLeu 773
                                                                                                18.2. AAAAAACTI ACGCT TETGA FGAAGGAT CAGA TGAAGCAGATGGAAGCAAGCATCTCCCA 54.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             834 GlyGluSerlysPheGlnGlnLysLeuAlaGluMetThrSerThrArgThrArgMetGln 853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         542 GGAGAGTCCAAATTTCAGCAGAAACTGGCAGAAATGACTTCTACTCGAACACGAATGCAA 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, Mo 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             854 TystilniysMetAshAspSerMetAspThrsorAshTystInGlutys 869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FOZ AAGYAGAAATGAATGATGATGGATAGGTGAAAGAAGAAGAAAAA 649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib-"Soares_mammary_qlaud_NMLMG"
                                                                                                                                                                                                                                                                                                                                                                                                      Seq primer: -28ml3 rev2 ET from Amersham
High quality sequence stop, 422,
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /sex."female (lactating)"
/lissee.type "mammary gland"
/lab_host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1996)
Contact: Marra M/Monse ESF Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism-"Mus musculus"
/db_xret-"tixon-10000"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: mouseest *Watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The Washu BHMI Mouse ESI Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                914 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone-"IMAGE:1247598"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Washu HIMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA764411.1 01:2813158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   114 286 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fax: 414 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MCI: 661286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA76.1411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA76.1411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ...
...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DREANISM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA76.841170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FUALCIRUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          South E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SDOT
                                                                                                                                                                          5
                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                     40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ĩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                        5
```

```
With a Not 1 oliqo(d1) primer, bomble stranded cbNA was ligated to Beo RI adaptors (Pharmacla), digested with Not 1 and cloned into the Not 1 and Eco RE sites of the modified pTTTW vector. Library is normalized. Library mas constructed and M. Falima Bonaldo. " 178 c 261 t lothers
                                                                                                                                                                                                                                                                                                                                                                                                                                                     317 ArgThrValMetAsnThrIleGlnGlnGeuMetHetIleLeuAsnSerAlaSerAspGln 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             797 TGGGCTGTTTTGGAACCIATCCAACAAFTTATTGTGATTTTTAAACTCCGCAATGACCGC 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7.37 CCCTCAGAAINEC1611 - ECCUTAAIA HOGG COGGTAACCCAAAGAAATTCCC 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    357 LeulysArqValLysAspileGlyTyrilePheLysSlsLysPheAluLysAlaValGly 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              678. CHAAAACHAAGGACGH IGGGCACA FOLLIAAAGAGAACH FICHA - AUGCHGUGC 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         622 CCAGGCTGTGTGACCATCGGAGTACAGGATAIAAACITTGAGTGCGATGGTAITAACGT 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          997 ValMetGluSerMetLeuLysSerGluGluGluGluArqLeuSerlleGluAsnPheSerLys 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      562 GTGATGGAATCCATGCTTAGATCAGAAGAAGAAGATTGTCCATTCAGAATTTTAGAAA 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                417 LeuLeuAsnAspAsnIleFheHisMetSerLeuLeuAlaCysAlaLeuGluValValMet 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              437 AlaThrTyrSerArgSerThrSerGluAsnLeuAspSerGlyThrAspLeuSerPhePro 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              457 Trp11cLcuAsnValLcuAsnLeutysAlaPheAspPhetyrLysValLiccTuSerPhe 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ¥7¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      477 IleLysAlaGluGlyAsnLeuThrArgGluMetIleLysHisLeuGluArgCysGluHis 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    497 ArqileMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeufleLyss3ln 516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              262 CSAATCATGGAATCCCTTGGATGGCTTTCAGATTCAGCTTTATTTGATGTGATTAAGCAG 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      202 TCCAAGGATGGAGAAGGACCT - GATAACCTTGAACCTGCTTGTCTCTCAAGCTGCTT 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       537 LendinAssAsnHisThrAlaAlaAcpMetTyrLenderProValArqSetProLystys 556
                                                                                                                                                                                                                                                                                                                                                                                                                          277 PheticuAspHisAspLySThrLeuGlnThrAspSerilleAspSerPheGlnThrGlnArg 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                856 ACCCACGAAAACCACCTTGT GAAGGCCAAAACCGGTTAGTCCCACGCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             377 GlnGlyCysValGluIleGlySerGlnArqTyrLysLeuGlyValArqLeuTyrTyrArq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               442 GCIACGIATAGCAGAGIACAIIGCAGCAICTIGAIICIGGAACAGAIITGICCTICCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      517 SerlysAspArgGluGlyProThrAspHisLenGluSerAlaCysProLenAsuLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     297 ThrProArqLysSerAsnLeuAspGluGluValAsnVallleProProHisThrProVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           337 ProSerGluAsnLoulleSerTyrPheAsnAsneysThrVaTAsnProEysGluSerTLe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
Mismatches:
                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                            indels:
                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                            US-09-026-459A-47 (1-869) x AA763411 (1-914)
                                                                                                                                                                                                            2.84e-92
1056.50
82.148
75.978
23.478
                                                                                                                                                                                                                                                                                   Best Local Similarity:
                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                   BASE COUNT
                                                                                                                                         OKICIN
                                                                                                                                                                                                                                                                                                                                                                                                                             Ò.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ΩÇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CO
CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
```

```
g
                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                          <del>2</del>
                                                                 òχ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                            PREFET 12F042_F1 313 (cyccopy hlore) Home Sapions conn cloud attack 13F042 51, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Berlin/Germany) within the cDNA sequencing consortium of the German
                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota, Metawoa, Chordata, Craniata, Vertebrata, Enteleostomi;
Mammalia; Eutheria; Primatos: Cataribini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Clone from S. Wiemann, Molecular Genome Analysis, German Cancer Research Center (DKF2); Email s.wiemannädkiz-heidelberg.de; sequenced by BMF2 (Blomedical Research Center at the Charite.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This clone (DKE2p313F692) is available at the K2FG in Berlin
Please contact the P2PD Pessourcenzentrum, Heubnerweg 6, 14059
Berlin-Charlottenburg, GPPMANY: Email: clone@rypd de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ziab_host_"bH108"
Znote "Westor, pTriplEx2; Site_1, SfilA, Site_2, SfilB,
cDNA-collection"
197 LysGlySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAla 576
                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST (Koehrer K., Beyer,A., Mewes,H.W., Weil,B. and Wlemann,S.) Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   216 strivalizeroyatysdiumischofyananienspoluvaltysnanvaltyrhetya 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 AATTITATAGGTTTTATGAATTGTGTTGGAGTTGTAAAGATGTAATGGAGTTGGAGAGGTT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             256 OluAsuLeuSerlysArdfyrCluGluffeTyrLeuLysAsnfysAspleuAspAlaArg 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 246 AsnPhelleProPheMetAsnSerLeuGlyLonValThrSerAsn@lyLouProGluVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Koehrer, K., Beyer, A., Mewes, W., Weil, B. and Wiemann, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Am Klopferspitz 18a D 82152 Martinsried, Germany This is the 5' sequence of the clone insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /Clone_lib "313 (spaceym. hlee2)"
/dev_stage="admit"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    179 t.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .26.459A-47 (1-869) x AL599633 (1-605)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xre1~"taxon:9606"
/clone "DKF2p313F092"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       106 \, g
                                                                                      937 PheGlnThrGlnLysProLeuLys 584
                                                                                                          25 ITCCATA/TCAGAAGCCATTGAAA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No sl sequence available
                                                                                                                                                                                                                                                                                                       AL599633.1 G1:15162921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1037.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.24e-90
                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 605)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    93 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Koehrer K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23.03%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genome Project
                                                                                                                                                                                                                                                                                                                                                                      Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Loral Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       228 a
                                                                                                                                                                                                                                                                                A1.599633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                  human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            M I PS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        coory Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOUTH
                                                                                                                                                                                                                                     DEFINITIN
                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE CUNT
                                                                                                                                                                                                                                                                                ANTERSE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JUSTRNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                    A EFFERENCE
                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                            A1.5996.43
                                                                                                                                                                          RESULT 8
                                                                                                                                                                                                                                                                                                       VERS :: N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . . . MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RISIN
                                                                                                                                                                                                                7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
```

```
ALSG 257 (TI_NFLODI_NEC4 Home Sapieus ~ENA clone csOpportYA05 3 ALSG 357 ANA Sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note "Ordan. brain, Vector. pCMVSPNET 6, 1st strand oDNA was primed with a Not1-01'go(dr) primer. Five prime end enriched, double stranded cDNA was digested with Not 1 and cloned into the Not 1 and Eco RV sites of the pcMVSPORT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Enkary-da, Metazea, Therlata, Traniata, Veitekrata, Euteleostomi;
Mammalia, Eutheria, Filmatea, Catailhini, Hominidae, Homo.
11 (bases 1 to 792)
Li,W.R., Gruber,C., Jessee,J. and Folayes,D.
                                                                                                                                                           296 ArgihrProArqiysSerAsnicuAspCluCluVa.AsnVallieProProHisthrPro 315
                                                                                                                     356 HeleutysArgVallysAspHeClyTyTHePhetysClutysPheAlatysAlaVal 375
                                                                                                                                                                                                                                                                                                                                              481 GGACAGGGTTGTGTGGAAATTGGATCACAGCGATACAAAGTTGGAGTTCGCYTGTAFTAC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541 CGAGTAATGGAATCCATGCTTAAATCAGAAGAAGGATTATCCATTCAAAATTTTAGC 600
276 LeuPheLeuAspHisAspLysThrLeuGlnThrAspSerIleAspSerPheGl ThrGln 295
                                                                                                                                                                                                                                          336 GluProSerGluAsuLeulleSerTyrFheAsuAsuGysIlrValAsufroit, soluser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rmail: segref@genoscope.ens.fr, Web : www.genoscope.ens.fr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Full-length cink libraries and normalization Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type-"neuroblastoma cells"
/lab_host."DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genoscope - Centre National de Sequencage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib="LTI_NFL001_NBC4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP 191 91006 EVRY cedex - France
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xret="taxon:9606"
/clone="cs0DD007YA05"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Al.563757.1 G1:12913464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /sex-"male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ћишап.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     416 Lys 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601 AAA 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sontce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              I-EFINITI-N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A1.563757/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MERCHANION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
```

```
694 bp mKNA linear EST 12-JUN-2000 R72-BT0642 210200 014-096 BT0642 Homo sapiens cDNA, mKNA sequence. HE082846
                                                                                                                                                                                                                                                                                                                                                                            183. ALaVal11 (PPO LI L'ASEGLYSCEPTOATQ I bEPTOATGARGEYGE) GERAIGE 202
                                                                                                                                                                                                                                                                                                                                                                                                                    909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24 f. SertandigtzetValihrSerAsnGlyt.euProGluValGluAsnLeuSerLysArgTyr - 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            545 GARGAALITITGTTAAAALAAAGATCFAGATGCAAGATTATTITLOOWICATGAFAAA 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28 UhrtenGlofhrAspSerfleAspSerPheGluThrGlnArqThrProArgtysSerAsn 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILITITITI FILITITI FILITITI FILITI FILITI FILITITI FILITITI FILITI SOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     305 FCYTWTFTTACGACGCTGACGATGAATCCAAAAGAATAACTGAAAAGGATATACTGAAAAGGAT 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             963 110-31g-tyr (1-ePhotyschutyscherlatyschaft) (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (1974) 197 (197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     245 WIKGGALACWIYIIIAAAGAGAAAAIIIGCIAAAGCIGIGGGACAGGIIGIGIGGAAATT 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.22 TreethettisMetSertientLenAla@ysAlaLenGluValValWetAlaThrTyrSerArg 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    221 CluCysAsnileAspiluVallysAsnVallyrPhelysAsniheileProPheMetAsn 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     303 Leudspüllug Luva LashVall HeProProProHisThr ProVal ArqThr Val Mct. AsnThr 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         42 t HeddinGlinLeuMetHeleuAsuSerAlaSerAspGluProSerGluAsnLeuIle 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         04. SertlyrPheAshAshCystbrValAshProtysGluSerfTefeutlysArgVallysAsp 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          402 entysserGluGluGluArqLeuSerTleGlnAsnPheSertysLeuf.euAsn -AspAsn -421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HITHITE HITHITHIT THE HITHITHITE SEE WITHITHITES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    203 ArqileAlaLyoSlnLeuSluAsnAspThrArqileileSluValLeuSysLysSluHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                555 GAATGIVATATAGWIGAGGIGAAAAATGITIWITTGAAAAATITTATAGGTTTTTATGAAT
                                                                                                                                            \hat{\pi}
                                                                                                            Conservative:
Mismatches:
                                                                        Matches:
                                                                                                                                                                                        indels:
                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                    49 026 459A 47 (1 869) x ALS64757 (1 792)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HE082846,1 GI:8473151
                                    4,496-90
                                                                                                        84.41%
81.75%
                                                                                                                                                                                        856.27
                                                                                                        Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              442 Sec 442
Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5. Ac:1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BEURZ846/C
                            Pred. No. :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MESSINE 1 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N. 111S
                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \stackrel{>}{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
```

```
/note-forgan: breast; Vector: puelk; Site I: Smal; Site 2: Smal; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196 / 716 - Ludwig Institute lor Cancer Research) profiles into the pUC 18 vector, Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringerey conditions.
                                                                                                    (bases 1 to 694)
Dias Neto,E., Garcia Correa,E., Verjosski Almenda,S., Rilones,M.K., Nagai,M.A., da Silva,W. Jr., Zaqo,M.A., Bordin,S., Tostay,F.F., Goldman,G.H., Carvalho,A.F., Matsukma,A., Baia,G.S., Simpson,D.H., Brunstein,A., devliveira,P.S., Bucher,P., Jongenerl,C.V., O'Bare,M.J., Soares,F., Brentani,R.K., Reis,L.F., de Sonza,S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This sequence was derived from the PAPPSD/LICK Human Caneer Conductory Conductors as seen in the following URL (http://www.loukia.org.bt/Sersipto/jethtml2.plrf. htt. BCD-822.210.200-014 e06x13 2000-02.216x4-1)

Seq primer; pure 18 forward High quality sequence stop: 669.
                                       Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
Mammalia; Eutheria; Primates; Catarthini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                              Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509 010, Sao Paulo Sp.
                                                                                                                                                                                                                                                                Shotqun sequencing of the human transcriptome with owe expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  86.V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         407 GluArqLeuSerIleGluAsnPheSerLysLeuLeuAsnAspAsnIlePheHisMetSer 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 47 AsmCysThrValAsnProLysGluSerlleLeuLysArqValLysAsplledlyTyrille
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       387 TyrlysLeuGlyValArqLeuTyrTyrArqValMetGluSerMetLzouLysSerGludlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Proc. Natl. Acad. Sci. U.S.A. 97 (7), 4491 4496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 of hers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1.977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism-"Homo sapiens"
/db_xret-"taxon:9606"
/clone_lib-"HT0642"
/dev_staqe-"Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-026-459A-47 (1-869) x BE082846 (1 694)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: asimpson fludwig.org.br
                                                                                                                                                                                                                                                                                                                                                                                Laboratory of Cancer Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  127 g
                                                                                                                                                                                                                                                                                                                               20202663
Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7.276 90
1030.00
96.33%
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tel: +55-11-2704922
Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               129 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    94.95%
22.88%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .694
                                                                                                                                                                                                                                                                                       sequence tags
                                                                                                                                                                                                                                                Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                               Brazil
                       інітап.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No.:
                                         ORGANISM
                                                                                                        REFERENCE
                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                          JOHRNAL
                                                                                                                                                                                                                                                                                                                                 MEDITINE
COMMENT
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                1111E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
```

```
1 (bases | Fo 623)
Melton, D., Meadows, A., Clitton, S., Hillier, L., Marra, M., Pape, D., Wyije, I., Martin, J., Histaha, A., Schmitt, A., Theising, B., Ritter K., Konko, L., Bennett, J., Cardemas, M., Gibbons, M., McCann, R., Cole, K., Isagareishyili R., Williams, J., Tarkson, Y. and Howers, Y. Washu Harvard Pancreas EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST 13-MAP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Libraries were constructed by Dr. Douglas Melton DNA sequencing by, Washington University Genume Sequencing Center For information on obtaining a clone please contact: Juliana Brown (brown das.harvard.edu)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Righogy, 7 Divisity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metanoa, Chordata, Craniula, Vertebrutu; Loteleostomi,
Mammalia; Eutheria; Primales; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This sequence now available from the IMAGE consortium, for clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AW583181 EST 13-MAP-2
tallh09.yl Haman Pancteatic Islets Homo sapieus cDNA clone
IMAGE:533649 F. similar to jbom15490 PETINORIASTOMA ASSOCIATID
                                                                                                     PROTEIN (HUMAN); 95:M26391 Mouse retinoblastoma susceptibility protein (MOUSE);, mkNA sequence.
LeuLeuAluCysAlaLeuGluValValMetAlaThrTyrSerArgSerThrSerGlnAsn 446
                                                     4.47 TEATEGGGGEGEGGCCTCTFGAGGTFGTAATGGCCACATAFAGCAGAAGTACATCTCAGAAT 378
                                                                                                                                                                                                                   457 PheAspPheTyrtySVallleGluSerPhelleLysAlaGluGlyAsnLeuThrArgGlu 486
                                                                                                                                                                                                                                               447 MetilelysBisLeuGluArgCysGluBisArqIleMetGluSetLeuAlaTrpLeuSet 506
                                                                                                                                                                                                                                                                                                                                                     * 17 AspSerProLeuPheAspLeuTleLysGlnSerLysAspArgCluGLyProThrAspHis 526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9.27 hongliggeralacyetremonasement-protonglinasnasnatissbrataalaaspwe 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            137 (11) GAATCI GCTTGTGTGTGTGTGTGTGTGTGTAATGAAATGAAGGAGATAT 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib "Human Panereatic islets"
/tissue_type="islets of Landerhans"
/dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      orders contact: info@image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organicm "Homo saplens"
/db_xrcf "taxon:9606"
/olono="iMAGE:5638049"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     dmeltenabiohp harvard edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence stop: 430.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Endocrine Pancreas Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -40RP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AWSRELL SILTERITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Capablished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               617-495-1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fax: 617-495-8557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MA 021 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30.11.0s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A CESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J CIENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTH RS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AW584181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHAMMENT
                                                                                                                                                                                                                                                                                                                              3:
                                                                                                                                                                                                                                                                                                                                                                                                                                 5
```

```
AA763485
*W6461c1 Soarcs_mammary_gland_NNAMA mismaccaline clan clane
*W6461c1 States_mammary_gland_NNAMA mismaccaline clane
*MACE 121765 5' similar to gb.*M1100 RETINORIASIONA ASSOCIATED
PPOTFIN (HUMAN): gb.*M26341 Mouse retinoblastoma susceptibility
                                                                                                                                                     Size selected by column fractionation;
                                /note="organ: Pancreas; Vector: pSPORT1; Site_1: Not 1: Site_2: Sal 1; Library constructed using SuperScript Plasmid Library kit (Life Technologies). CDNA made by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      331 isserataber AspidinProSergiadaniteu Heiser 7yr Phedardsnigys Thrivatas 351 isseratiaber Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hilli Hill
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                291 iFheGlufhrGluAiqfhiPtoAiqLysSeiAsaLeuAspGluGluValAsuValIlePr 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123 ANTINTARANGTESTAAAAFTITESTAAAGGAIAGGAAGAAATTITATTITAAAAATAAAAA 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              351 nProLysGluSerIleLeuLysAigValLysAspIleGlyTyrIleFMacLycGluLysPh 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         251 yleuProClaValCluAsnLeuSerLysArgTyrCluCluClyrLeuLysAsnLysAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  oligo di priming. Size selected by column fra
average insert size 1.08 kb. Frimary library,
unamplitied."
                                                                                                                                                                                                                                                                       1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
                                                                                                                                                                                                                                                                       186 t.
                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-026-459A-47 (1-869) x AW583181 (1-623)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein (MOUSE),, mRNA sequence.
                                                                                                                                                                                                                                                                       109 q
/lab_host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA763485.1 GI:2813232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               411 eGlnAsnPheSerLysLeu 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        603 TCAAAATTTTAGCAAACTT 621
                                                                                                                                                                                                                                                                                                                                                                                                                         1.44e-88
1015.00
98.07%
                                                                                                                                                                                                                                                                   93 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          97.108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22.578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                           234 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA763485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA763485/c
                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VEPSION
                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \frac{1}{12}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ĉ
```

```
Y I I I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ωp
                                                 ŝ
                                                                                         q
                                                                                                                                                                             9
                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ςy
                                                                                                                                     à
                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Another Poretor, p1713D pac (Pharmacia) with a modified polylinker; 1st strand cDNA was prepared from mammary adaut tissue from a lactating female, and was then primed with a Not I - Oliqo(dT) primer. Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified p1714 vector. Library is normalized. Library was constructed by Bento Soares and M. Falima Bonaldo. "
                                                                                                       1 (bases 1 to 871)
Marta,M., Hiller,L., Allen,M., Rowles,M., Dietrich,N., Dubuque,T., Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Strpfor,M., Jan,F., Underwood,K., Moore,B., Thetsing,H., Wylie,T., Lemon,G., Soares,H., Wilson,R. and
                                          Mus musculus
Enkaryota: Motazoa: Chordata: Craniata: Vertebrata: Enteleostomi:
                                                                                         Mammalia: Entherna: Kodentia; Sciuroquathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                               this close is available royally-free through LLNL; contact the LMAGE Consortium (into-simage.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                297 Thr ProArqLysSerAsu LeuAspGluGluValAsnVallleProProHisThrProV 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              416 alArqThrValMetAsaThrIleGinglaLeuMetMetlieleuAsnserAlaserAspG 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        80.4 TIGG GCGTTTTTGATACTACTCCACCATTAGGGGGGTTTTTAATTTCCCCAAGTATCA 745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16 IntrosorginAsnisorityrPheAsnAsnCysThrValAsnProLysGinSert 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            est letentysArqVallysAspileslyTyrIlePhetysGluLysPheAlaLysAlaValG 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      684 TOTTANDARY HAAAGOLD FOR GEOOGE HAAAAGAGAGGE ETAACGCEGEGEG 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HAN ANTICTAAGGAAAAATAATTOOTTI GOGAGGGGGGAAAAGGGGTTI AGGGGGGAAATTI ---GGAG 804
                                                                                                                                                                                                                                                                                                              Washington University School of MedicineP
4444 Forest Park Parkway, How 8501, St. Leuis, Mc 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /elong_lib_"Soares_mammary_qland_NMLMG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Seq primer: .28ml4 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /sex "Temale (lactating)"
/tissue_type="mammary gland"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches:
                                                                                                                                                                                                                                                                  Unpublished (1996)
Contact: Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /ordanism."Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High quality sequence stop: 495.
Location/Qualitiers
1. .871
                                                                                                                                                                                                                                                                                                                                                                                                                          mouseest "watson.wustl.edu
                                                                                                                                                                                                                                            The WashU HHIMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Caps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US US UZE 459A 47 (1 B69) x AA763485 (1-871)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xret="taxon:10090"
/elone="IMAGE:1247665"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /lab_host-"DH10H"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.550 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1014.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80.44%
74.48%
                                                                                                                                                                                                                                                                                                                                                                                114 286 1800
                                                                                                                                                                                                                                                                                                                                                                                                       1810
                                                                                                                                                                                                                                                                                                                                                                                                       314 286
                                                                                                                                                                                                                          Waterston, k.
                         house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MC1:661353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Allegament Secrees
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Otterry Mateh:
                                            RCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                  I JUKNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.
                                                                                                                                   AUTHORS
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N 1 : 1 40
                       SOURCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
```

```
Linear EST 14-FEH-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa, Chordata, Craniata, Verfebrata, Euteleosfomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                602364278F1 NIH_MGC_90 Homo sapiens cona clone (Mach. 4472611 S',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 496 isArglleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeu11e1ysG 516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                  504 CACTCCTAAATGACAACATCTTTCATATGTCTNIACTGGCCTCTGGCTCTTGAAGTGGAAA 445
                                                                                                                                                                                                                                                                                                            436 etAlaThrTyrSerArgSerTbrSerCinAsnlæuAspSerGlyThrAsplæuserPhæy 456
                                                                                                                                                                                                                                                                                                                                                                                                                                    456 roTrp11eLeuAsnValLeuAsnLeuLysAlaPheAspPheTyrLysVall1edJuSerP 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        476 helleLysAlaGluGlyAsnLeuThrArqGluMetIleLysHisLeuGluArqCysGluH 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             264 ATCGAATCATGGAATCCCTTGCATGGCTTTCAGATTCACCTTTATTTGATCTCATTAAGC 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           516 InSertysAspArqGluGlyProThrAspHisLeuGluSerAlaCySProtenAsmLeuP 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              204 AGTICCAAGGAIGGAGAAGGACCT - GATAACCTIGAACCTIGCTICTICTICTICAGCTIGC 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  536 roLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerProValArqSerProLysL 556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIH-MGC http://mqc.nci.uih.qov/. National institutes of Health, Mammallan Gene Collection (MGC) National institutes
                                                                                          116 ysLeuLeuAsnAspAsnIlePheffisMetSerLeuLeuAlaCysAlaLeuGluValValM 436
                                                                                                                                                                                                                                                                                                                                                                      444 IGGCTACGTATGCAGAAGTACATTGCAGCATCTTGATTCTGGAACAGATTTGTCCTTCC 485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          556 ystysctyserthrthrargvalasnserthralaasnalagluthreinalathrsera 576
624 GCCAGGCTGTGTGACATCGGAGTACACGATATACACTTGGAGTCCGATTGTATTACC 565
                                                             496 rgValMetGluSerMetTeut;ysSerGluGluGluAraLeuSerTlecHnAsuPheserF, 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               eDNA Library Preparation: Lite Technologies, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (HLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                found through the L.M.A.G.E. Consortium/LLNL at: http://image.llul.gov
Plate: LLAM10293 row: 1 column: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      922 bp mknA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High quality sequence stop: 634.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: cgaphs-ramail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              576 laPheGlnThrGlnLysProLeuLys 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27 CCTTCCATACTCAGAAGCCATTGAAA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BG253543.1 GI:12763359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 922)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mKNA sequence.
BG253544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HG253543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BG253543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              · FEATURES
```

/db_xre1-"taxon:9606"

```
Settle of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control
                                                                                                                                   /tissue_type="adenocarcinoma, cell line"
/lab bost="04108 (phage=resistant)"
/cet="ovjy= limer Vert a [CMV Secsio Site_" W.L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Programment for the parameter of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  699 iValPheMetGlnArgLeulysThrAsnileLeuGlnTyrAlaSerThrArgProProTh 719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            719 rLausarProllaProHistlaProArgSarProTyrLysPhaProSarSarProLauAr 739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  536 FALLGAAGGATGAGATGAGGGGAGATGAAGTAAACATGCTCCCAGGAGAGTCCCAAATCT 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *1 SZATTG-GACCAAATTATGATGTGTTTPCATGTATGGGATATGCAAAGTGAAGGATATAGAA 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         * Franchische Lysthe I per I per January Lyska Speu Profitski aval Gludlu I h. 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        238 GGTOTTTO FGCAGAGAGTIGAAAACAAATAT TITGGAGTATGGTITGGACAAAAAAA 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      297 FITGLEACCAAFACCTCACATTCCFCGAAGCCCTTACAAGTTTCCTACTTCACCCTTTACG 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7.9 gliebrodlydlyAsmileTyrileSerProLealysSerProTyriysileSerClud: 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    779 rPheGlyThrSerGluLysPheGlnLysIleAsnGlnMetValCysAsnSerAspArqVa 799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             537 GCTCAAAAAAAGTGCTGAAGGAAA-CCTCCTAAAAACACTGAAAAAACTACGTTTGA 595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       819 piledlustySerAspGluAlaAsp-GlySerLySHis-LeuProGlyGluSerLySPhe 838 tillittittittittittittis:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             838 sladiniysLenAladluMetThrSerThrArgThrArgMetGlnLysGlnLysMetAsn 858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        fize ThelleliplhricambedinHisThricadinAsmSiu TyrdiaLcaMctArgAspAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (3) a HislandspCln11eMetMetCysSerMetTyrClyf11eCystysVallysAsn11cAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FP9 TPheLysArgValLeufleLysGluGluGluCluTyrAspSerflefleValPheTyrAsnSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  H'M AspSerMetAspThrSerAsnLysGluGluLys 869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16 GGAAGCIGGGTACCICCACACAGGAAAAAAA 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Watches.
                                                                 /clone_lib-"NIH_MGC_90"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-922)
/clone-"IMAGE:4472611"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .26-459A 47 (1-869) x BG253543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.730-87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1004 00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90.518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22.30%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bost Loral Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ASE CHAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Al istument
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N O E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ≥;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -
```

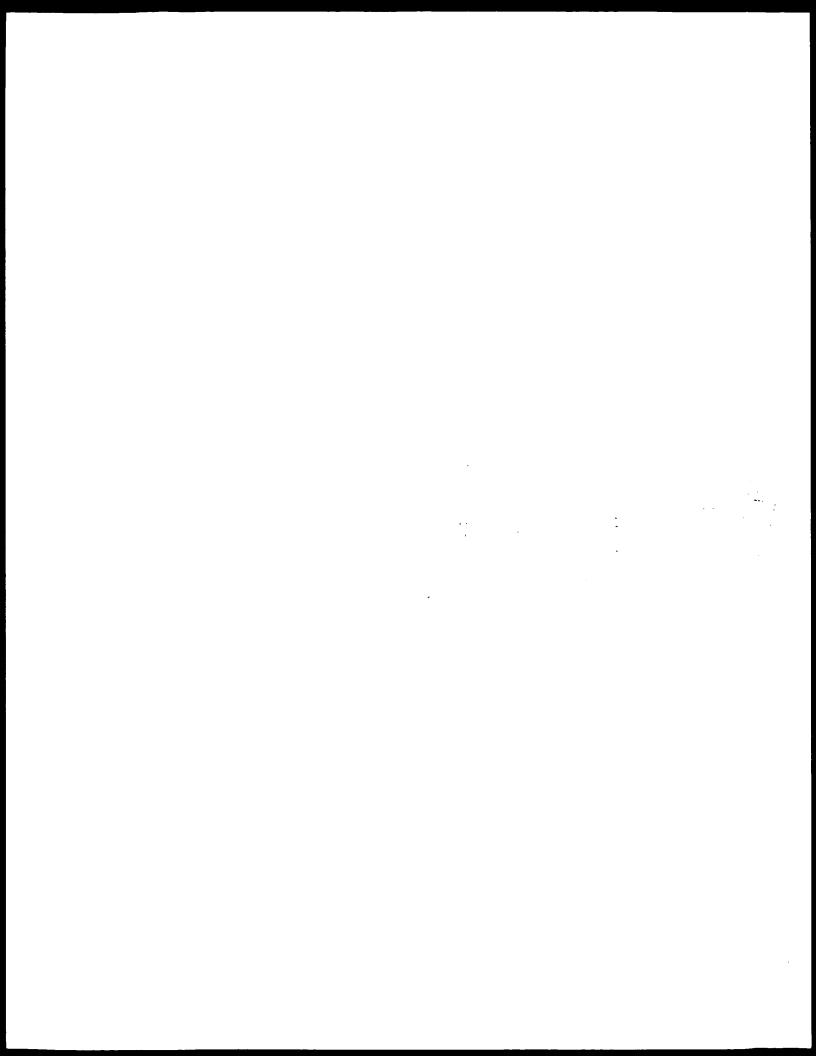
```
PM475603
AJENNT REFARENCE NEW MOZER HAML SAFIARS CHWA LLAR EMAGRISSYSGES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /close_lib="NHH_MGC_92"
/close_lib="NHH_MGC_92"
/tissue_lype="embryonal carcinoma, cell line"
/tissue_lype="embryonal carcinoma, cell line"
/tissue_lype="embryonal carcinoma, cell line"
/tosue_lype="embryonal carcinoma, cell line"
/note="forgan: testis: Vertor: prMV Spopr6: Site_l: Not1:
Site_2: Sall: Clored unidirectionally; uniquedf primed.
Average insert sine 2.5 kb. Library caniched for fall longth clones and constructed by life Technologies.
**Note: this is a NHH_MGC Library."
                                                                                                                                                                                                                 Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA Sequencing by Agenceut Risseiere Corporation Clone distribution: McC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
Plate: LLAM12326 row: f column: 04
                                                                                                                                                                                                                                                                                   1 (bases 1 to 1001)
MIH-MCC PPP (Ampre) in N. Por .
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            135 LeuLysGluIleAspThrSerThrLysValAspAsnAlaMetSerArqLeuLysLys 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            155 TyrAspValLeuPheAlaLeuPheSerLysLeu-GluArqThrCysGluLeuIleTyrLe 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cONA Library Preparation. Life Technologies, Inc. CONA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98 TATGATGATATGGTACTCTTCAGCAAATTCGGAAAAGGACACACGTGAACTTATATATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            218 TEGGATGAGAPETETATTAGGTAAAGGGGAAGTATTACAAATGGAAGATGALGGTGAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
Indeis:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Longth:
Matches:
                                                                                                                                                                                                                                                                                                                                                                              Contact. Robert Strausberg, Ph.D.
Email: cgapbs.r@mail.nih.gov
Tissue Procurement: AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-026-459A-47 (1-869) x BM475603 (1-1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence start: 17
High quality sequence stop: 734.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     174 uThrGlnProSerSerSerMet-----
                                                                                                                                              RM475603 1 GT-18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  250 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 996.50
74.528
70.978
                                                                                                                                                                                                                                                                                                                                                        Unpublished (1999)
                                                                                             5', mRNA sequence.
BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       349 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                       NECTINIDAD.
                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                              Marith K
                                                                                                                                                                                                                                                                                                                                                           JOURNAL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
RESULT 14
                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                    KEYWORDS
                             BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score.
                                                   SHOOL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \overset{\circ}{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ó
```

```
LETINITION CM FIRST 181899-924-610 HT0181 Homo sapiens cDNA, mkNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: asimpsorfludwig.org.br
This separate was derived from the PAPESP/LICK Human Cancer Genome Project: This outry can be seen in the following URL.
(http://www.lewwig.org/br/fig/s/jetifumlz.plst.cms.u2-CM3-HT0181-18109-025-elow.b-1999-10-1864-1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bomo sapiens
Eukaryota: Metazoa: Chordata; Craniata: Verfebrata; Enfeleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rna Prof. Autonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            278 FTCATITCAGIIAATGCIAIGCTIGCTIGACIATITIAITAAAACIGGCGGCGGAIGTI 337
                                                                                     ValAlaValileProlleAshGlySerProArgThrProAr 195
                                                                                                                                48 GYLYAAAGAAYYATATAAAAYAGYIGTTATACGATTAATGGILGAGGIGGAAGAGGGGA 397
                                                                                                                                                                                                                                                                     195 aArqGlyGlnAsnArqSerAlaArqIleAlaLysGlnLeuGluAsnAspThrArqIleIl 215
                                                                                                                                                                                                                                                                                                                     215 eChuVallzenCystyschuHisGluCysAsn1JeAspChuVallysAsnValTyrPhety 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            THTTHE HELLITHER HELLITHER HELLITHER HELLITHER HELLITHER HELLITHER HELLITHER SATISFICE AND ANAMARICE AGAING AND SATISFICE SANAMAN AND SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN SANAMAN 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 275 qtemPhetenAspHisAspLysibrLenGInTbrAspSerTToAspSerPheGInTbrG1 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      295 nArqthrProArqtySSerAsnLenAspGtnG1nVaTAsnVaTTLeProFroB1SThrPr 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     415 oValArqThrValMetAsnThr11e0InGInLeuMetMetTletreuAsnSerAlaSerAs 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3.5 polinProSerGluAsuLenfle - Sertyr PheAsuAsuCysThrVal - AsnProLysGl 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HIR TCANCETTCANANANICOSALITICCIATITITANCANCIGCACCIGGANICCONANAG 877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -VallysAspileGlyTyrile: PhetysGlufys: 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6.48 ATIATITITIGGATCAIGAIAAAACICITCAGAATGAITCIATAGAGACAGIITITGAAACACA 697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            828 AAAQTIAIACCOAAAAAAAAACCIAACGAAIAIAGGAAIAAACCICCIIIIAAAGAAAAA 937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            255 161uAsni oqsori yeArqTyr@luGluTloTyrLoQLysAsni ysAspi oqAspAlaAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 588)
HOGP http://www.lodwiq.org.br/oRESIPS
The EAPESP/LICE Homan Cancer Genome Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ludwig Institute for Cancer Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Laboratory of Cancer Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Simpson A.J.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PheAlatysAlaVal'319 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       938 HPTGGCTAAAAGCTGGGG 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AW 8682 84, 1 GT: 587 2884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fe1: +55 11 2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      654 uSerlletentysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Brazil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCUSSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROMISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FULKNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEEL KENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PESSOLI 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AW COM 2 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1111.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C. MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  =
                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \frac{1}{2}
```

```
Ab_archine name Suprems
Ab_archine from Suprems
Actone_lib="HTO181"
Adv_stage="Adult"
Adv_stage="Adult"
Anote="trigge="Adult"
Anote="trigge="Adult"
Anote="trigge="Adult"
Anote="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigge="trigg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       504 TrpLeuSerAspSerProLeuPheAspt.en/FeLysCluSerLysAspArqCluClyPro_524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            543 aAlaAspMetTyrLeuSerProValArqSerProLysLysLysGlySerThrThrArqVa 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123 AGCAGATATGTATCTTTCCTGTAAGATCTCCAAAGAAAAAGGTLCAACTACCCCGTGT 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             563 (AsnSerThralaAsnAlaGluThrGlnAlathrSerAlaPhwMhthrGlnLysProle 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 583 utysserthrsert.cusert.cushetyrt.yst.ysValtyrArglanAlatyrt.cuArgt.c.603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60% aAsnThrLeafysGluArqLeuLeuSerGluHisProGluLeuGluHisHleTleTrpTh 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              303 AAAT ACACT EGEGAACGCCTT CTGT CTGT GAGGACCAAATT AGAANA FA FOAT CTGGACT 36.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               664 sileileValThrAlaTyriysAspLeuProHisAlaValGluGluThrPhalysArqVa 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            483. AATGATTGTAACAGCATAGAAGGATCTTGCTGATGCTGTCCAGAGAGACATTGAAAACGT 54.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           524 ThraspHisLeuGluSerAlaCys-ProLeuAsnLeuProLeuGluAsnAsnHisThrAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          623 rt.cuPheGluHisThrt.cuGlnAsnGluTyrGluLcuMetArqAspArqHisLcuAspGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                683 licuiletysGluGluGlulyrAspSerlletteValtheTyrAsn 698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            543 TTGGATCACAGAAGAGGAGTATGATCCTATCATAGTATTCTATAAC SEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
Mishatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches:
                                                                                                                                                    /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-026-459A-47 (1-869) x AW368234 (1-588)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : sdpg
                                    High quality sequence stop: 559.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100 d
Seq primer: puc 18 torward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6.640-85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  978.00
97.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         135 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8.4.26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21.72%
                                                                                                                    . 588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ţ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ੰ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

Search completed: January 19, 2003, 05:07:14

Job time : 1936.58 secs



```
Copyright (c) 1993 \pm 2004 Compugen Ltd.
```

oM nucleic : nucleic search, using sw model

Ruth con:

January 16, 2003, 15;20:22 | Search time 2011,21 Seconds (without aliquments) 18469.506 Million cell updates/sec

Porties Profes 837 | COOSTOALGEORGAAAC......AAATGAGGATTATTGATAGT 3377

Gapop 10.0 , Gapext 1.0 IDENTITY, NUC Scoring table:

16154066 seqs, 8097743376 residnes Searched:

32140132 Total number of hits satisfying chasen parameters

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post processing: Minimum Match 0% Maximum Match 100% Listing lirst 45 summaries

ESE batabase :

em estiun: em_estnu:
em_estov:
em_estov:
em_estov:
em_esto:
em_esto:
em_testo:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em_tte:
em em_estom:* qb_qss:* om_estba:* qb_est4;*
qb_est5;* qb_cst 4:* qb htc:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

em dss ofher:*

em_gss_pro:*

cm 488_inv: *
em 488_inv: *
em 488_vut: *
em 488_vut: *
em 488_inam: *

em_qss_hum:•

SUMMARIES

			Description		HM450031 AGENCOURT	BM561083 AGENCOURT	BQ439221 AGENCOURT	BM545881 AGENCOURT	BQ220275 AGENCOURT	ALS97811 DKFZp3130
CHIMMAKER			115		1923 14 HM450031	BM561083	80439221	BM545881	HO220275	A1.597811
			Ŧ.		~.	-	14	<u>-</u> 1	=	۶,
			Match Length DB 1D		1073	1071	1081	77	H H	177
	*	Query	Materi	:	0.7.	6.47	4.57	÷		5.17
			Score		7.016	901.4	856	152.4	240.8	7.25.4
		Result	ž		-	74	~	4	, ·	÷

699.6 699.6 699.6 699.6 699.7 699.8 691.8 690.5 691.8 690.5 690.5 600.9	HASCISEGI 6025511848 HASCISTA 6 602591312 HM464144 AGENOTIKI	AL563755 BM45372	M18683			BMZ54009 BE082846		AL599633 DKFZp313P 83253553 662364238										AA258255 2159q04.1			3808913H	B1821116	18192518	18022227		A1093213 q004402.X AL598766 DKF2p313F		CHENT		4 bp mRNA linear EST 05-FEH 2002 2 Homo Sapiens charactone IMAGE:5528037				Cranjata: Verrebrata: Enteleostomi:			. Mammalian Gene Collection (MGC)	1.13.	a tig	TAMA OF Conception (III)	A service Consol Claim (1200) Biographic Corporation (1200) A service for fortunation (1200)	Tarser for the commence of the		·
C 10 699.6 20.7 823 12 8 6 692.2 20.5 767 12 9 691.8 20.5 762 13 12 660 19.5 672 13 13 646 19.1 1644 13 646 19.1 1644 13 642.2 19.0 661 10 15 642.2 19.0 661 10 18 605.2 17.9 623 10 19 605.2 17.9 623 10 22 57.2 17.9 623 10 23 56.4 16.8 871 9 25 580.2 17.9 623 10 26 24 558 16.5 871 9 27 580 17.2 680 9 28 580.2 17.9 623 10 28 580.1 17.2 680 9 28 580.2 17.9 623 10 28 580.2 17.9 623 10 28 580.1 17.2 680 9 28 580.2 17.9 623 10 28 580.1 17.2 680 10 28 580.2 17.9 623 10 28 580.2 17.9 623 10 28 580.1 17.2 680 10 28 580.2 17.9 623 10 28 580.2 17.9 623 10 28 580.1 17.2 680 10 28 580.2 17.9 623 10 28 580.1 17.2 680 10 38 486.4 16.8 878 10 38 486.4 16.8 878 10 38 486.4 14.4 584 10 38 486.4 14.3 1001 11 40 40.1 14.3 1001 11 40 40.1 14.3 1001 11 40 40.1 14.3 1001 11 40 40.1 14.3 1001 11 40 40.1 14.3 1001 11 40 40.1 14.3 1001 11 40 40.1 14.3 1001 11 40 40.1 14.3 1001 11 40 40.1 14.3 10 40 47.4 14.0 744 10 40 486.0 14.1 2083 13 40 486.0 14.1 3.5 643 13 40 486.0 14.1 3.5 643 13 40 486.0 14.1 3.5 643 13 40 486.0 14.1 3.5 643 13 40 486.0 14.1 3.5 643 13 40 486.0 14.1 3.5 643 13 40 486.0 14.1 3.5 643 13 40 486.0 14.1 3.5 643 13 40 486.0 14.1 3.5 643 13 40 486.0 14.1 3.5 643 13 40 486.0 14.1 3.5 643 13 40 486.0 14.1 3.5 643 13 40 486.0 14.1 3.5 643 13 40 486.0 14.1 3.5 643 13 40 486.0 14.1 3.5 643 13 40 486.0 14.1 3.5 643 13 40 486.0 14.1 3.	BC510551 BC570456 BM465194	ALS63757 BM453724	B1868359	BE23378	BG616,219	BE082846	AW583181	AL599644 EG253543	AL599105	AA76 4411	AM 1582 14 AA76 3485	AW582967	Al.692790	RE931236	AV7155+3	BF144857	MM802735 B1151568	AADSBDSS	BG149050	MM475603	HE168095	B1821116	MI526982	водрадату	ME934784 A1094015	AL598766	B1553947	NI TON	AL. LCN	7 1		7.1		thordata:	rimates;	i.nih.gov	i Bealth,	isberg, Ph	nih. gov Tee Zoetna	tion: Lit	gencourt	A.G.E. O	r d coll	stop: 64 difiets
C 10 691.6 20.7 823 823 8 692.2 20.5 767 9 691.8 20.5 792 825 12 80.5 792 825 12 80.5 792 825 12 80.5 792 825 12 80.5 792 825 12 80.5 792 825 12 80.5 792 825 12 80.5 792 825 12 80.5 792 825 12 80.5 792 825 825 825 825 825 825 825 825 825 82	걸걸ੜ	5 ²	Ĩ.		-1 -	2	0 .	э <u>с</u> 1	- 6	ر م											10	~ ~	~ -	74	- o		13			z z		0661			1 1 2	. nc	S	rau		oara Sara) 4)	2.	g å	eno,
C 10 691.8 20.5 20.5 20.5 20.5 20.5 20.5 20.5 20.5	823 767 972	79 <i>2</i> 835	672	797	6.81 	694	623	60	084	914	987	865	734	597	594	734	736	575	0.84 4.04	1001	484	659 2000	7.84	088	497	732	643			6393544	ednopec	GI:184		ns Metazoe	Eutheria	1 to 10. tp://mqc	nstitute A ziggg	obert St	pbs-rām. Curement	ary Prej	ncing by	ugh the	M12204	ty seque ocation,
C 10 691.8 601.8 6	20.7 20.5 20.5	20.5	19.5	13.1	0.0 0.0	18.2	9.71	17.7	17.2	17.0	8 - 9 10 - 3	15.7	15.7	15.3	15.2		15.0	14.6	4.4	14.3	14.3	14.2	7 7 7	8.61	5 E	3.5	13.5			50031 NCCURIL	MKNA S	50031.1	an.	o sapier arvota:	malia;	(Dases -	ional In	tact: Re	il: cgal sue Pro	NA Libra	A Sequer	nd thro	p://imac	h qualli Si
C 10 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	699.6 692.2 691.8	691.2 678	099	643.6	642.2	614	605.2	596.4	580	575.2	558 558	530.2	530 130	516.8	514.2	512.2	505.2	493.8	486.4	484.2	481.4	480.2	474.4	465.6	459.2	457	455.4							SM HOM	Маш	NIE	Nat	Con	Ema	5 5	S O C	5.g.;	P13	Hiq
			12	<u>:</u>			က သ	5 C4			24	25		. 8 1 7	5.6						3.7				4 4 7 E	. 4				RESULT 1 BM450031 LOCUS DEFINITIC	ACT SSTOOD	VERSION	KEYWORDS SOURCE	ORGANIE	T.Nagaaaaa	KEFEKENCE AUTHORS	TITLE	COMMENT						PEATURES

```
Another Option skin Vertor pCMV-SpokTG, Site, 1 Not1:
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 2 kt. .: Orary constructed by Life
                                                                                                                                                                                                                                                                                                                                                                     1965 CAAAGIGAAGAAIATAAAFIITAAATICAAAATCAIGIAACAGGATACAAGGAICTICC 2024
                                                                                                                                                                                                                                                                                                                                                                                                                                                    2025 IOATGOTGITOAGGAGAGATTGAAAGGTGTTTTGATGAAGAAGAGGAGTATGATTGTAT 2084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2085 IAIAGIAITCIAIAACICGGICIICAIGCAGAGAGAAAAAAAAAIAIIIGCAGIAIGC 2144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2145 TECCACCAGGGGGGGTAGGTGTGTGAGGAGGAATTGGGAAGGGGGGTTAGAAGTT 2204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZZUS TÜMTARITIMAMMITINAMAGATITMIRITIMGAGOGAAGATGTATATITTMAGOGGIGAAGAGTIGG 2264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2265 ATAIAAAAIITCAGAAGGICTGCCAACAACAAAAAATGACTCCAAGATCAAGAAIGIT 2324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2385 ATGTAACAGOGACCGTGTGCTCAAAAGAAGTGCTGAAGGAAGCAACCCTCCTAAACCACT 2444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2445 GAAAAAACTAGGCTTTGATATTGAAGGATCAGATGAAGGAAATGAAAGTAAAQATGTCCC 2504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2505 AGGAGAGTCCAAATTTCAGCAGAAACTGGCAGAAATGACTTCTACTCGAAACACGAA 2564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2625 03500TT0CT03ACACTGT0TACACTCT6GATF0ATFGT0TCT0TCT0AVA3ATGT0ATA 2684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JENS TAACTITCCCASCITCTCTTTATCCCASCITTAAIATCTCTCACCICTTTTGTGAAAA 2744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2745 AAAATGTGGAGATGGAATTGTTT - GGGTGATTGGTTAAGGGAAATGTTAGTGATTT 2802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 TCATGCTGTTCASGAGATTCAAAGSTGTTTTGATCAAAGAAGAGGAGIAIGAITCTAF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361 AGIALCAAIIGGIGAAICATICGGGACTICIGAGAAGTICAGAAAATAAATCAGATGGT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 561 GGACCIICGTGGAAAPEGGGGTAAAAAPEGATGATTGATTGATTGATAGATGTGAGATGTGAAGATGTGAATGTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721 IAACITIGGGAGGITGTGTITATGGGGAATITAAIATCTICAGGTGTITITGGAIAT 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27.0%; Score 910.2; DB 13; Length 1023; 95.2%; Prod. No. 6.7e 168;
                                                                                                                                                                                                                                                                                                                        43; Indels
                                      /clone "IMAGE.5528037"
/clone_lib="NIH_MGC_72"
/tissue_type "melanctic melanoma"
/lab_host="DHIOB (phage-resistant)"
                                                                                                                                                                                                                    281 t
                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                       Average insert size 2 kt.
Technologies."
211 c 197 g 281 t
/orqanism-"Homo sapiens"
                      /db_xre1-"taxon:9606"
                                                                                                                                                                                                             197 g
                                                                                                                                                                                                                                                                                                                          Matches 972; Conservative
                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                 QUETY Match
                                                                                                                                                                                                                                                                                                      Best Local
                                                                                                                                                                                                                HASE COUNT
                                                                                                                                                                                                                                        RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
```

```
/lab.host="DH10B (plage-resistant)"
/note="Organ: eye; Vector: pCMV-SPORT6; Site_1: Not1;
Site_2: SalI; Cloned unidirectionally. Frimer. Olido dI.
Average insert size 1.75 kb. Library constructed by Lile
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota, Metazoa, Chordata, Craniata, Vertcbrata, Buteleostomi;
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
2803 GTATTTATANAAGATTNAAAATSTETGAAATSCTSCCATTTAAAAAGTTGTAGGAAA 2862
                                                                                                                                                                                                    2863 TTGTT1 - POTOTOTOGAAAGTAAATTGGTGTGTGTTTATGGATAGTAAGAAGA---CCC1 2918
                                                                                                                                                                          2919 ADAGTGGGAGTGTTGATAAYYYAGGGGTGTGTGAGTAGTTGGGGTGGTTGTTGTAGGATAL 3978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1243 AATTITAGYAAACTIGIGAATGACAACATITITGAJATGIGITATIGGGGGGGGGGTT 1302
                                                                                                          HILLE HELLER HELLER HELLER HELLER HELLER GATAGAAGAATGGCCCTA 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1183 TTGTATTACCGAGTAATGGAATCCATGCTTAAATCAGAAGAAGAAGAATTATCCATTGAA 1242
                                         841 GTTATTTATACCAGAITGAAAAFCTTGTAAAICCIGCCAATTAAAAAGTTGTAGCAGA 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arcayed Ly. The L.M.A.S. Coulostium (LLNL) DNA Sequencing by. Agencunt Blosvience Cotporation Clone distribution: MGC clone distribution information can be found through the L.M.A of F. Consortium/LLNL at:

Plate: LLAM12263 row: m. column: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6) PPOPAPTAPOGASTAATGSAATGCAFGCTTAAATGAGAAGAAGGAFTAFEGGATTGAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 1051)
NIH-MGC http://mgc nci nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2: Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 909.4, EB 13, Length 1051;
Pred. No. 9.6e-168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indelo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type-"retinoblastoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Average insert size 1.75 kb.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        299 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact. Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism "Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib-"NIH_MGC_67"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone-"IMAGE:5550905"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        197 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ċ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BM561083.1 GI:18806043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rechnologies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26.98;
98.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          221 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
Matches 938; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        330 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                  2979 A 2979
                                                                                                                                                                                                                                                                                                           1021 A 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESS 10N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                 BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>د</u>
```

```
Timear PST 24 MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mg4 4922)
ADENDOURT 7756562 NIH MGC_92 HOMO Sapiens CDNA clone IMAGE:6015480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia: Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                             1963 TEGETTEGGGATGGATTGTGAATGTGGTTAAITIAAAAGGGTTGGATTTTAGAAAGTG 1422,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1603 CHTAATCH FOTOTOTOTCAGAATAATCACACTGCAGCAGATATGTATCHTGTGTGTGTAGTAAGA 1662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1663 ICTGCAAAGAAAAAGGTTCAACTACGCGTGTAAATTTCTAATGCAAATGCAGAGAGAA 1722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1903 TATGAACTGAGAGAGACAGGATTTGGACGAAATTATGATGTGTTCGATGTATGGCATA 1962
                                                                               1303 GAGGLIGLAALGGGGACAFATAGCAGAAGTACATCTCAGAAFCTTGALLGTGGAACAGAT 1362
                                                                                                                                                                                                                                                                                                                                                                                                                                           14.2.3. ATCGAAAGTITTATCAAAGCAGCAACTTGACAAGGAAATGAFAAAACATTTAGAA 1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         154 * CITATIAAACAATCAAAGGACCGAGAAGGACCAACTGATCACTTGAATCTGCTTGTCCT 1602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1724 GCAACCTCAGGCTTCCAGACCCAGAAGCCAIIGAAATCIACCTCTGITTCACTGTTTAT 1782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1783 AAAAAAGIGTATOGGTAGGGTATGTGGGGTAAATAGAGTTTGTGAAGGGGTTGTGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1963 TOTAAAGTGAAGAATALAGACTTFAA-ALICAAAALCATTGTAAGAGGATAGAAGGATGC 2021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481 CITANICITECTECCAGAAIAATCACACTGCAGAGATATCTATCTTCTCCTGTAAGA 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.21 CLIALLAAACAATCAAAGTACGAGAAGGACCAAGTGATCACCTTGAATGTGCTTGTCCT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541 FOLGGAAAGAAAAAGOTIGAAGTAGGGGTGTAAATTGTAGTGCAAATGCAGAGAGACAAA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661 AAAAAAGTGTATGGGCTAGGCTATCTCGGGCTAAATACACTTTGTGAAGGCCTTCTGTGT 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 AAITTTAGCAAACTTCTGAATGACATTTTTTGATATGTCTTTATTGGGGTGCGCTCTT 180
                                                                                                                                                                         181 GAGGILGTAA FGGGPACATA FAGGAGAGAGTGTTCAGAA LCTTGATTGTGGAACAGA 1 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NIH Mich http://mgc.nci.nib.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                              2022 (CCTCALSCIUTICAGGAGACELCAAACGIGI-TITGATCAAAGAGGGG 2073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               901 TOTALITATION CARGAGA AND STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D.
Email: eqapbs:r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BQ4 89221.1 GI:21178297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 1081)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5', mRNA sequence.
RQ439221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HIJKNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HO4 1922]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MMENI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \stackrel{>}{>}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
```

```
/tissuc_type "embryonal carchouna, cell line"
/lab_host="DHOB (phage=resistant)"
/note="Organ: testis: Vector: profW-SPORT6; Site_1: Not1;
Site_2: Sall; Cloned unidirectionally; oligo dT primed.
Average insert size 2.5 kb. Library enriched for
full-fength clones and constructed by Life Technologies.
Note: this is a NHH-MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3079 TITGATIGACIGGCCALLCACCAAAATTALCCIGAACTTICTGTAAAAATGAATALTATA 3138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2479 GAAGTAGTAGTAATTAAAGTACTGCCAGGAGTAGTGCCAAATTTCAGCAGAAACTGGCAGAA 2538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2599 AACAAGGAAGAAAAATGAGGATCTCAGGACCTTGGTGGACTGTGTACACCTCTGGGATT 2658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2659 CATTGTCTCTCACAGATGTGACTGTATAACTTTCCCAGGTGTGTTTATGGCGAGATTTA 2718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2719 ATATCTTCACCTCTTTTTGTGGAFATAAAATGTGCAATGGTAATTGTTGGGTGATTGCT 2778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2959 IGCCIICITIIGTAGCAIAIAGGIGAIGTIIGGICTIGIITITATAATIIATAIGIAAA FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  019 ITTITITAATITAACAIGAACACCTIAGAAAAIGIGICTATCIATCTITCVAAATGCAA 3078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601 TTTGATTGACTGCCCATTCACCAAAATTATCCGGAACTCTTCTGCAAAAATGGATATTAT 660
            cDNA Library Preparation: Lite Technologies, Inc.
cDNA Library Arrayed by: the L.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bloscience Corporation
Clone distribution: MCC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               indels 4; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2779 AAGCCACTTGAAATGTTAGTCATTGTTAITIAIACAAGAFIGAAAATCFIGTAAATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241 ATATCTTCAGCTCTTTTTGTGGATATAAAATGTGCAGATGCAATTGTTTGGGTGATTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2839 TGCCATTTAAAAAGTTGTAGCAATTGTTCCTCCTAAAAGTAAAATTGCTGTGTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25.3%; Score 856; DB 14; Length 1081; 99.1%; Fred, No. 2.7c 152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Prod. No. 2.7c 157
0; Mismatches 5
                                                                                                                    http://image.llml.gov
Plate: LLAM13211 row: k column: 01
                                                                                                                                                                                                                         /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                   /clone_lib-"NIH_MGC_92"
                                                                                                                                                                                                                                        /db_xre1-"taxon:9606"
/clone-"1MAGE:6015480"
                                                                                                                                                             Righ quality sequence stop: 742
                                                                                                                                                                              Location/Qualifiers
Tissue Procurement: ATOC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 99.13
Matches 892, Conservative
                                                                                                                                                                                                   1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                  HASE COUNT
                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
```

•

```
human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MSINVEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 5
BO220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                  λο.
•••
                                                                                                                                                                                                                      д
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note-"Organ: Ovary (pool of 3); Vector: pCMV-SPORT6; Site_1: EcoRV (destroyed); Site_2: NotI: PNA source pool of three ovaries, from females ranging in age from 38 to other evaries, from females ranging in age from 38 to three ovaries, so the ovaries of solyan-dr primed and directionally cloned 49 yo. Library is olyan-dr primed and directionally cloned size 2; kt, insert size range 13.5 kb, intersty is size 2; kt, insert size range 13.5 kb, intersty is size 2; kt, insert size range 13.5 kb, intersty is cormalized and erriched for full-length clones and was normalized by C. Gruber (Invitrogen). Research Genetics constructed by C. Gruber (Invitrogen). Research Genetics 216 q. 359 t. 2 others
                                                                                                                                                                                                                                                                                                                                           lineal EST 20-FEB-2002
                                                                                                                                                                                                                                                                                                                                             BMS45881
AGENICOURT 6505183 NIH_MGC_125 Homo sapiens CDNA clone iMACE:5588245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2404 CICAAAAGAAGIGGIGAAGGAAGCAACCCICCIAAAACCACIGAAAAAACIACGCITIGAI 2463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2334 FITCGGGACTTCTGAGAAGTTCCAGAAAATAAATCAGATGGTATGTAACAACGAAAGTGTG 2403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryold, McLadou, Cherdara; Craniata, Vertebrata; Eureleostomi;
Mammalia; Eutheria; Primates; Catarifici; Heminidae; Home.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDNA Library Preparation: Life Technologies, Inc. CDNA Library Preparation: Life Technologies, Inc. CDNA Library Argencynt The T M A.G E. Consortium (LLNL) NNA Sequencing by: Agencynt Bioscience Corporation Colone distribution: MGC clone distribution information can be cloud through the L.M.A.G. E. Consortium/LLML at: http://image.llml.gov
                                                                                                                                                                                                                  3119 GAACITAGTGATTATTTTGTTGATGCAACITATGTTTTAAATGA-GGATTATTGATAGT 3377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NIH-MGC bttp://mgc.nci.nth.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                            3318 AGTATAACCATATGATACTATCATACTACTGAAACAGATTTCATACCTCAGAATGTAAAA 3318
3199 GATATACIGIGIGIGTIGITITATAAAATITITGCTITITAALTAAAAGGGGGAAGCAA 3258
                                                                                                                                                                                                                                      22.3%; South 752.4, Pw 14, Lonath 1122;
95.6%; Pred, No. Se-137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       32; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Figure: LLAMI2359 row: a column: 14 migh quality sequence start: 48 High quality sequence stop: 773. Location/qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="IMAGE.5588245"
/clone_lib="NIH_MGC_125"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism-"Homo sapiens"
/db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Invitrogen
                                                                                                                                                                                                                                                                                                                                                                                                                                  BM545881.1 GI:18778365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 1122)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                      mkNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Copery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                        NOTITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOHNNA!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                   RESULT 4
BM545881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
```

```
HQ220275
AGENCUORT_7572621 NIH_MGY192 HOMO Sapiens CDNA CLORE 1MAGE 6044522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryola Metasoa chordata charata Verrebrata; Futeleostomi; Eukaryola Metasoa chordata. Catarrhini; Hominidae; Homo. Mammalia: Eutheria Frimates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 881) NH+Mas http://mgc.nci.nih gov/. NH+Mas http://mgc.nci.nih gov/. Unbushali Institutes of Health, Mammalian Gene Petromian (MGC) Unpublished (1999) Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3061 TCTATCTTCCAAATGCAATTTGATTGACTGCCCATTCACCAAAATTATCCTGAAULUIU 3120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3121 TGCAAAAAT-GGATATTATAGAAATTAGAAAAAATTACTAATTTACACAITAGATTT 3179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1018 igcaaaaatigitagaaattagaaaattagaaaaattactaattitcccctaaaaatt 1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3004 TAATTTATA --TGTATALLILLIFATTTAACATCAA-CACCTTAGAAATGTGTCCTA 3060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2884 AATTGCTGTGTGCLITIAIGGAIAGTAAGAAIGGCCCTAGAGIGGGGAGTCCTGATAACCCAGG 2943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2944 CCIGICIGACTACTITGCCTTCTTTTGTAGCAIATAGGGGATGTTTGCTCTTGTTTTAL 3003
                                                                                                                                                                                                                                                                                                                                                                                                                      840 ccrdrcrdaciricacric-ringracariragandargringcrdrrdrift 898
                                                                                                                                                                                                                                 2764 GITIGGGIGATICCIAAGCCACIIGAAAIGIIAAGCAIIGIIAIITAIACAAGAITGAAA 2823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2704 TIAIGGCCACATTIAATATCTICAGCTCTTTTTGTGGATATAAAATGTGCAGATGCAATT 2763
                                                                                                                                                                                                                                                                                                                                                                                                                                      2584 AGCATGGATACCTCAAACAAGGAAGAAATGAGGATCTCAAGGACCTTGGTGGACACTGT 2643
                                                                                                                                                                                                                                                                                                                                                                                      660 GITIGGGTGATICCTAAGGCACTIGAAAIGTTAGTCATTGTTATTATACAAGATTGAAA 719
                                                                                                                                                                                                                                                                                                                2464 ATTGAAGGATCAGATGAAGCAGATGGAAGTAAACATCTCCCAGGAGAGTCCAAATTTCAG 2523
                                                                                                                                                                                        360 ATTGAAGGATCAGATGAAGCAGGAAGTAAACATCTCCCAAGAGAGTCCAAATTTCAG 419
3180 TATTTACTATTGGAATCTGATATA 3204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1078 TATTTTACTATTGAAAAACGGAATA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HUZZ20275.1 GT:20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5', mRNA sequence.
BQ220275
```

```
Another Torquis testis: Vector: pCMV-SPORT6; Site_1: Not1; Site_2: Sall; Cloned unidirectionally; oliqo-dT primed. Average insert size 2 % by ithrary enriched for full length clones and constructed by Life Technologies. Note: this is a NiH-MGC ibrary."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97.4 ATM MAMMATTAATGATTTTTAATTTCAGCAAGTGATCAACCTTCAGAAAATCTGATT 1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1033 POTALLITAACAACIGCACAGIGAALCCAAAAGAAAGTATACTGAAAAGAGTGAAGGAT 1092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1094 ATAGGATACATCTTTAAAGAAAATTTGCTAAAGCTGTGGGGACAGGATGTCTGAAAATT 1152
                                                                                DNA Sequencing by: Advanced to the Association (LLAN), close distribution: MGC close distribution in MGC close distribution information can be found through the L.M.A.G.E. Consortium/LLNL at: Plate: LLAM13287 row: c column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              165 CGGATAGCAAAAACAACTAGAAAATGATACAAGAATTATTGAAGTGCTGTGAAAGAACAT 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  673 GAALGFAATAFAGAFGAGGFGAAAAAFGTTTATTGAAAATFFFTATACCTTTTATGAAF 732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   225 GAATGTAATATAGATGAGGTGAAAAATGTTTAJTJCAAAAATTTTATAGGTTTTATGAAT 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2.3. ICTETTGGACTTGTAACATCTAATGGACTTCGAGGTTGAAAATCTTTCTAAACGATAC 792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            793 GAAGAATITTALCITAAAAAJAAAGAICIAGAIGGAAGAITAITIFIGGALGAIGATAAA 852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               853 ACTIVITORGACTGA FOTRATAGACAGTTTTGAAACACAGAAGAGAGAAAAAAGTAAG 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             913 CTGATGAAGAGGGAAGGTAGGGCACACACACAGTAGGACTGGTAAGAACAC 972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     465 CTTGALGAAGAGGGAATGTAATTGCTGCACACTGCAGTTAGGACTGTLATGAAGACT 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                525 ATO::AACAATTAATGATGATTTTAAATTCAGGAAGGTGAAGGTTGAGAAAATGTGATT 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         705 GGATCACAGAGAATACAAAGTTGGGTGGAAFTAGGAAGAAATAAGGAAFCATGGTT 764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    55 f GCTGTTATACCCATTAATGGTTCACCTCGAACACCCAGGCGAGGTCAGAAACAGGAGTGCA 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2; Caps
                                            chNA Library Preparation: Lite Technologies, Inc., chNA Library Arrayed by: the L.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21.9%; Score 740.8; DB 14; Length 881; 98.8%; Pred. No. 9.4e-135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib-"NIH_MGC_92"
/tissue_type-"embryonal_carcinoma, cell_line"
/lab_host-"DHIOB_(phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ndels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. 9.4e-135;
0; Mismatches 7;
                                                                                                                                                                                                                                                                                                 /organism "Homo sapiens"
/db_xret="taxon:9686"
                                                                                                                                                                                                                          High quality sequence stop: 690.
                                                                                                                                                                                                                                                                                                                                                /elone-"IMAGE:6044522"
                                                                                                                                                                                                                                               Location/Qualifiers
Email: eqapbs:ramail.nih.qov
                            Lissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                            .881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11 5 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 767;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ouery Mateh
                                                                                                                                                                                                                                                                                 SCIICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                    FFA HIKES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NICH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ==
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \frac{\hat{\Xi}}{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
```

```
EST 14 AUG 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Poustka,A., Wellenreuther,R., Mewes,H.W., Weil.B. and Wiemann.S.).
EST (Poustka,A., Wellenreuther,R., Mewes,H.W., Weil.B. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bomo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleosfomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequenced by DKFZ (German Cancer Research Center,
Heidelborg/Sermany) within the GDNA sequencing consortium of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note-"Vector: pTriplEx2: Site, 1: STilA; Site 2: STilB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Please contact the RZPD: Ressourcenzentrum, Heubmerweg 6, 14059
Berlin-Charlottenburg, GERMANY: Email: clone:rzpd.de.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1875 CCTTTTCCAGCACACCCTGCAGATGAGTATGAACTCATGAGAGACACATTTGGACCA 1934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKFZ): Email s.wiemann-dkfz: heidelberg.de;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1755 GAAATCTACCTCTCTTTCACTGTTTATAAAAAAGTG1A1CGGCTAHCTCTCCGGCT 1814
1213 AAATCAGAAGAAGAATTATGGATTGAAAATT1TAGCAAACTTGTGAATAGAAAAA T 1271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1815 AAATAGACTITGTGAAGGCCTTCTGTCTGAGCACCAGAATAGAACATAGAACATGGAG 1874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 COTTITICAGGACACACCOTGGAGAATGACTATGAACTCATGAGAGACAGGCATTTGGAACA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 AAATACACTTTGTGAAGGCCTTGTGTGTGTGAGCACCCAGAAATIAGAAGAIALCAFCTGGAG 120
                              AL597811 727 bp mRNA linear EST 14 AUG
DKF2p31300816_r1 313 (synonym: hleel) Homo sapiens cDNA clone
DKF2p31300816 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No sl sequence available.
This clone (DKEzp31300016) is available at the KZFD in Berlin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels 0; daps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GAAATCTACCTCTCTTTTCACTCTTTTTATAAAAAGTGTATCGGCTACCTATCTCCGGT 60
                                                                                                      1272 ITHICAIATGI-CITIATIGGGGIGGGCTCTTGAGGTGTAATGGCCACATATATAG 1326
                                                                                                                              Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21.5%; Score 725.4; DB 9; Length 727; 99.9%; Pred. No. 9.8e-132;
Live C. Mismatches I, Indels C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Max-Planck-Institute for Molecular Genetics
Innestrasse 73, 14195 Berlin, Germany
TTEL: 449-30-84141623
Fax: 449-30-84141128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence of the clone insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone_lib="313 (synonym: hlee2)"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: poustka@mpimg-berlin dahlem.mpq.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           198 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism-"Homo sapiens"
/db_xrel-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone-"DKFZp41300816"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        130 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /lab_host-"DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA-collection"
                                                                                                                                                                                                                                                                                                                                                                 ALS97811
ALS97811.1 GI:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Pousika Á.J.
Department Lehrach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           German Genome Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           161 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 99.99
Matches 726, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This is the 5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                      human.
                                                                                                                                                                                                                                                                                                                                                                                                                           EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Source
                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                     RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                   AL597811
                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
```

```
EST 18-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryola, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi; Mammalia; Eutheria: Primates; Catarrhini; Hominidae; Homo. (bases 1 to 823) NIE-MGC brip://mgr nci nih gov/ NIE-MGC brip://mgr nci nih gov/ National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        602611848FT NIH_MGC_6@ Homo sapiens obNA clone IMAGE 4737634 57,
                                                                                                                                                                                                                                                                                      2115 GAGACTGAAAACAAAIAIIITGCAGIAFGCIICCACGAGGCCCCCTACCTTGTCACCAAT 2174
1235 AATTATGATGTGTTCCATGTATGGCATATGCAAAGTGAAGAATATAGACCTTAAATTCAA 1994
                                                                                           1995 AATGALIGIAACAGGAFACAGAFCFLCCFCAIGCFGFFCAGGAGACAFFCAAACGFGF 2054
                                                                                                                                                                                      2055 FTFGAFGAAAAAAAAGAGGAGTATGATTGTTATTAAGTATTATAAGTGGGTGTTGATGGA 2114
                                                                                                                                                                                                                                                                                                                                                                                 2175 ACCTCACATTCCTCGAAGCCCTTACAAGTTTTGCTAATTTCAAAGTTTAAAGATTTAAAAATTTAAAAA 2234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Z2995 AACMAAATGACTOCAAGATCAAGAATCTTAGTATCAATTGGATGAAYCATGGAGGGGGGAGGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2415 FGCTGAAGGAAGCAACCCTICCTPAAACCACCTTGAAAAATTAGGGTTTTGATATTTGAAGGATTC 2474
                                                                                                                                                                                                                  181 AATTATGATGTGTFCCATGTGTGTATGCAAAGTGAAGAATATAGACTTAAATTCAA 240
                                                                                                               541 AACAAAAA IGACTOCAAGATGAAAATGTTAGTATGATTGGTGAATGATTTCGGAATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421 ACCTONOATTOOTOGAAGOOTTANAAGITTOOTAGEOANOTTAGGGGATTOOTGAAGG 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2245 GAAGA POTATATETOAGGGEFFGAGAGGTGGATATAAAATTEGAGAAGG PGPGGGAGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cDNA Library Preparation: CLONSTECH Laboratories, Inc. cDNA Library Arrayed by: The I M.A.G E Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tound through the L.M.A.G E Consentium, an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        http://image.llnl.gov
Plate: ifcMi605 row: o column: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      823 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        High quality sequence stop: 709.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Oualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BG610661.1 GI:13662032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA sequence.
RG610661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2475 AGATGAA 2481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721 AGARGAA 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BG610661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BG61 )661
Lactis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTHURS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JUCKNAI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULI 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>c</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>a</u>
```

/ordanism-"Homo sapiens"

/db_xret+"taxon:9606" /clone="IMAGE.4737634"

```
/Lissue_type="adenocarcinoma"
//Lissue_type="adenocarcinoma"
/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2805 TATITATACAAGAIIGAAAAICTIGIGIAAAICCIGCCAITTAAAAAGIIGIAGCAGAIT 2854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2865 GTTTGGTGTTGGAAAGTAAATTGGTGTGTTTTTTGGTTAGTAAGAATGGCCGTACAGTG 2924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8045 TAGAAAATGTGCTALCTACTTCCAAATGCAATTTGATTGACTGCCCATTCACCAAAA 3104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3105 TTATGCTGAACTCTTCTGCAAAAATGGATATTATTAGAAATT---AGAAAAAAALACIA 3151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3162 ATTITACACAITACATETETACTATEGAATCTCATATACTGTGTGTTTTTAL 3221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3222 AAAATITITGCITITAATTAAATAAAACTGCAAGGAAGTATAAGGATATGATACTATGA 3281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601 TTATOCTGAACICTICIGCAAAAATGGALAFFACOGAAAFCACGAAACACAATTACTA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      718 TAAAATITSTIIIAA*TAA*TAA*TAA*SISSAA*SAAASIAI-AGGAIALGAIALGAIAGGAAGGA 775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481 TGTTTGCTCTTGTTTTATTATTTATGTATATTTTTTATTTTATTTTAATTTAACATGAACACCCI 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661 ATTEMPOREACENT-TAGATTACTAFTGGAATCTGAFATACTGTGTGTGG-11CA 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 AGGAGAGTCCAAATTTCAGCAGAAACTGGCAGAAATGACTTCTACTGGAACACGAATGCA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181 TAACTETCOCASGITCTSIITAISSCCACATITAAIAICECCAGCICTIIISISGAIAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2745 AAAATGTGCAGATGCAATTGTTTGGGTGALTGTAAGGGAGTTGAAATGTTAGTGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 12, Length 823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indeis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 699.6, DB 12
Pred, No. 1.1e-126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         271 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        O, Mismatches
/clone_lib-"NIH_MGC_60"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     142 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match 20.7%;
Local Similarity 94.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ∴brary."
148 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            779, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tipe Li Watch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            검
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       겈
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

```
Zhote "andah, lund, Vertor, pDNR LIH (Clontech); Site_1:
SiII (querentequec); Site_2: SiII (qquestidaqce); 5' and
sequence. 5' CANGGENTIARGGE 3' and 3' adaptor sequence.
5' ALICIARANGCGAGGENTARGGE 3' and 3' adaptor size 1'9
KE (1411 - 3, 0) KE) 12/3; columber size 1'9
KE (1411 - 3, 0) KE) 12/3; columber size 1'9
KE (1411 - 3, 0) KE) 12/3; columber size 1'9
KE (1411 - 3, 0) KE) 12/3; columber size 1'9
KE (1411 - 3, 0) KE) 12/3; columber size 1'11 - 1'11
CA). Note: this is a NIII_MGE Library."
                                                                                                                                                                                                                                                                                                                                                                         EST 10-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                         167-2013/26 | HEST 10-APR-20
6025913/2ELNIH_MSY_77 HOMO SAPIENS CONA CLONE IMAGE:4717874 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2585 OCATOGATACOTCAAACAAAGAAGAAATGAGGATCTCAGGACCTTGGGGACACTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2645 TACACCTCTGGATTCATTGTCTCTCACACATGTGACTATAACTTTCCCCAGGTTCTGTT 2704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2705 TATGGGAGATTTAATATGTTGAGGTGTTTTTGTGGATATAAAATGTGGAGATGGAATTG 2764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2765 FFFROGEGALD PERANGONACITICA ANTICONTROLLA TENTENTA TACA A CARA 2824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DMA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be tound through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HITHERTHERM TO TAKE THE HITHER THE HITHER THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO THE TRACK TO TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 767)
NIH MGC http://mgc.nci.nih.qov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GOATGAATACCTCAAACAAGAAGAAAATGAGGATCTCAGGACCTTGGTGGACACTGTG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cDNA Library Preparation: CLONIECH Laboratories, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLML)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20.5%; Score 692.2; DB 12; Length 767; 97.1%; Pred. No. 3.1e-125; 1.0e-12 (1)ve 0; Mismatches 18; Indels 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone lib "NiH_MGC_77"
/lab_host="DH10H (T1 phage resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: eqapbs r≅mail.nih.gov
Fissue Procurement: CLONTECH Laboratories, Inc.
3282 TACTACTGAAACAGATTTCATACCTCAGAATGTAAAAGAACT 3323
                                                                                                        777 FACTALIGAA: CAGALLCALACCICAGAALGIAAAGAAGGI 816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Plate: LLCM1568 row: h column: 03
High quality sequence stop: 726.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone-"IMAGE:4717874"
                                                                                                                                                                                                                                                                                                                                                                    767 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xre1-"1axon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BG570456.1 GI:14578109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7.47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MKNA Sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E 117
                                                                                                                                                                                                                                                                                                                                                                         BG570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             183570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Numar.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 747;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Querry Mateh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Source
                                                                                                                                                                                                                                                                                                                                                                                                                     NOT LINITED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JUNE IN ALL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                             1805/7/04%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                 RESULT #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NIMM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NICE N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SMIRCE
                                                                                                                                                                                                                                                                                                                                                                         POCHS
                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
```

```
HM466194 BST 05-FEB 2002
AGENCOURT_6456973 NIH_MGC_92 Home sapiets chwa cleue IMAGE:5576939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo saplens
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 972)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note-"Organ: testis; Vector: pCMV SPORT6; Site_1: Not1;
                                                                                                                                                                   2945 CTGTCTGACTACTTTGCTTTTGTAGCATATAGGTGATGTTTGCTCTTGTTTATTATT 3004
                                                                                                                                                                                                                                                            1005 AATTTATATATGTATATTTTTTAATTTAACATGAACACCCTTAGAAAATGTGTCCTATGTA 3064
                                                                                                                                                                                                                                                                                                                                            3065 TCTTCCAAATGCAATTIGALTGACT - GCCCATTCACCAAAATTATCCTGAACTCTTCTGC 3123
                                                                                                                                                                                                                                                                                                                                                                                                                                     3184 TTACTATTGGAATCTGATATACTGTGTGTTGTTTTATAAAATTTTG\TTTTAATTAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3244 AAAAGCTGGAAGCAAAGTATAACCATATGATACTACTACTGGAACAGATTLICATA 3404
2825 ICTEGIGIAAAICCIGCCATTIAAAAAGIIGIAGCAGAITGIIICCIUTUTIAAAAGIAAA 2884
                                                                                    2885 ATTGCTGTGTTTATGGATAGTAAGAATGGCCTTAGAGTGGGGAGTCTTGALAANYCAGGC 2944
                                                                                                                                                                                          481 TCTTCCAAATGCAATTGGATTGACTGGCCCATTCACCAAAATTATCCTGAACTCTTCTGC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLNL at:
                      601 TTACTATGGGAATCTGATATACTGTTTGCTTGTTATAAAA-TITGCTTTAALTAAATT 659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIH-MGC http://mgc.nci.nih.gov/.
National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                        CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                     /ctone_lib="NiH_MGC_92"
/tissue_type="embryonal carcinoma, cell line"
/lab_host="DH10B (phaqe-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D.
Emall: capbs rimal.nih.gov
Tissue Procurement: ATCC
CONA Library Preparation: Lite Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               http://image.llnl.gov
Plate: LAMN12329 row: j column: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           High quality sequence stop: 621.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="IMAGE:5576939"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xre1-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Oualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BM466194.1 GI:18515236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5', mRNA sequence.
BM466194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OPGAN:SM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BM466194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.0CUS
                                        <u>a</u>
                                                                                    ò
                                                                                                                          a
                                                                                                                                                                      ò
                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                   90
                                                                                                                                                                                                                                                                                                                                              ó
                                                                                                                                                                                                                                                                                                                                                                                       90
                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q (1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      겲
                                                                                                                                                                                                                                                            ò
```

```
Site_2: Sall; Cloned unidirectionally; oligo-dT primed. Average insert aids 2 kb. Library Encions 1 for full-length clones and constructed by Life Technologies. this is a NHH_MGC Library." 2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               230] TGITTATGGCACATTAATATCTTCAGCTCTTTTGGGATATAAAAABGTGGAGATGCA 2760
                                                                                                                                                                                                                                    2541 IGTGTACACCTCTGGATTCATTGTCTCTCACAGAGAGTGTATAACFFFGCCCAGGTFC 2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2821 AAAATGTIGTGTAAATGCTGCCATTTAAAAAGTIGTAGCAGATGTTTGCTTGCTGAAAG 2880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (0) TATTAATTTATATGTATTTTTTAATTTAACATGAACACCCTTAGAAATGTGTGTCTTA 3060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                761 ALIGIIIGOGICALTOPPAAGOPACITGAAAFGFFAGFFGFFGFTATTITATAGAAGAFFG 2820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2941 AGGCTGTCTGACTACTTTGCCTTGTTTTGTAGCATATAGGTGATGTTGCTTCTTGTTTTTTT 3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *08] TOTATOTTOTANATGINATITGALISACIGGCCATICACONANALTATCOTGANGCICTIC 3126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1121 IGCAAAAATGGATATTATTAGAAATTAGAAAAAATTTACTAATTTTTACACATTAGATTTTT 3180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481 AITITACIATIGGAATCIGAIATACTGIG-----TGCTTGTTTTATAAAATTTTGCTTTT 3235
                                                                                                                                                                                                                                                                                                                                              361 IAAAATIGCTGTGTTTTATGGATAGTAAGAATGGGGCTAGGAGTGGGAGTCTGATAAQCC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481 FALTAAFTLAFATGFATATTTTTTAATTTTAACATGAACACCCTTAGAAAATGTGTCCTA 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181 IGTITATGGCCACATTIAATATCTICAGCTCTTTTTGTGGATATAAAATGTGCAGATGGA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601 TGCAAAAATGGATATTATTANAAATTAGAAAAATTACTAATTTTACACATTAGATTTT 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  56) ALTITANIATIGGAANCTGAFAFACTGTGGGGGTTGGTTTATAACAAFPTPGCCPFFFA 720
                                                                                                                                                                                                6, Gaps
                                                                                                                                                                                                                                                                            1 CATCACAAACTGGCAAAATGACTTCTACTCGAACACGAATGCAAAAGCAGAAAATGAAT 60
                                                                                                                                                                                                                                                             20 5%; Score 691.8; DB 13; Length 972; 96.7%; Pred. No. 3.6e-125;
                                                                                                                                                                                                19, indels
                                                                                                                                                                    Pred. No. 3.6e-125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _
_
_
_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4236 AATTAAATAAAAGCT-GGAAGCAAAGTATAACC 3267
                                                                                                                                                                                           0, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   728; Conservative
                                                                                                                                                                         Similarity
                                                                                     294 a
                                                                                                                                                  Query Match
                                                                                                                                                                         Best Local
                                                                                 HASE CHUNI
                                                                                                                                                                                         Matches
                                                                                                          RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u></u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
```

```
ò
                          ALS63757 LIL_NFL001,NBC4 Home sapiens CDNA clone CSOpponSYA65 3
                                                                                  Al.563757.1 GI:12913464
                                               prime, mRNA sequence.
AL563757
                                                                                                             human.
                                        DEFINITIA
RESULT 10
ALS64757/c
                                                                 ACCESSION
                                                                                            KEYW RDS
SOURCE
```

LOCHS

```
/note="Organ: brain; Vector: pCMVSPORT 6; 1st strand cDNA was primed with a Not1 Gligo(dT) primer. Five prime end enriched, double-stranded cDNA was digested with Not I and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cloned into the No. I and Eco RV sites of the pawesport by Lite Technologies. Consact: Effort Land Library was constructed by Lite Technologies. Consact: Feng Liang Lite Technologies, a division of Invitrogen 9800 weders! Drive Nockville, Maryland 23850, USA Fax. (1, 501 610 8371 Mmail: fliangelifetech.com UKL: 25 21 148 c. 117 q. 255 L. 26 others
                  Eskaryola, Metadas Chordala, Craniala, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    973 ATGUAAGAATTAATGATGATTTTAAATTCAGCAAGTGATCAACCTTCAGAAAATGTGATT 1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     785 GGTKTTATAGGGATTAATGGTTFCAGGTGGAAGAGGGGGAGGTGAGAAGAGAGTAGA 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         613 CGGATAGCAAAACAACTAGAAAATGATACAAGAATIATTGAAGTTCTCTGTAAAGAACAT 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          725 CGGWTAGCAACACAAYTAGAAATTGATACAAGAATTATTGAAGTTCTCTGTAAAGAACAT 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           733 TOTOTTGGAOTTGTAACATCTAATGGAOTTGGAGGTISAAAATGTTTGTAAACGATAC 792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KOS TOTETETETETEMAZATOTWARGGAOTEOZAGOTEGAAATTCTTTCTAAACGATAC 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      793 GAAGAAATITATETTAAAAATAAAGATETAGATEGAAGATITATTTTGGATEATOATAAA 852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       545 GAAGAAATTTTCTTAAAAATAAAGATCTAGATGCAAGATTATTTTGGWTGATAAA 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           853 ACTICTTCAGACTGATTCTATAGACAGTITTTGAAACACAGAACACCACGAAAAAGTAAA 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            913 CTTGATGAAGAGGTGAATGIAATFCCTSCACACACTCCAGTTAGGACTGTTATGAACACT 972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      305 TCYIWITITIACGACTGCACAGTGAATCCAAAAGAAAGIATACIGAAAAGAGIGGAT 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3, Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              673 GAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATTTTTATAGGTTTLFALGAAA
                                                                                                                                                                                                                                                      Email: segref@genoscope.cns.fr, Web : www.genoscope.cns.fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LB 3, Length 792;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              indels
                                                                   1 (bases 1 to 792)
Li,W. H., Gruber,C., Jessev,J. and Polayes,D.
FPLI1-length cDNA libraries and normalization
Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                             /Lissue_type-"neuroblastoma cells"
/lab_host-"DH10B"
                                                                                                                                                                                                   Genoscope - Centre National de Sequencage et 191 31066 EVRY cedex + France
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . č. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      / Match 20.54, Scote ed.2, LB 3, Local Similarity 93.68; Pred. No. 4.8e-125, nes 715, Conservative 23, Mismatches 23,
                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib-"LTI_NFL001_NBC4"
                                                                                                                                                                                                                                                                                                                                "Sargarism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                   /cloner_cscbb007YA05"
                                                                                                                                                                                                                                                                                  Socation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                    /sex="male"
                                                                                                                                                                             Contact, Genoscope
                                                                                                                                                                                                                                                                                                          792
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          246 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Coorty Matich
                                                                                                                                                                                                                                                                                                          Source
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                              AUTHORS
                                                                                                                                                  JOURNAL.
                                                                         REFERENCE
                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                            TITLE
                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ô
```

```
linear EST 05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           //issuc.type="melanotic melanoms" //issuc.type="melanotic melanoms" //isb host="DHIOR (phage-resistant)" // Note="requests sking vector: pCMV-ShokH6; Site_1: Not!; Site_2: Sall: Gloned unidirectionally. Primer: Oliqo dT. Average insert size 2 kb. Library constructed by Life Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTENIOURI, 6402743 NIH_MCC_72 Homo sapiens chNA clone IMAGE:5528814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota: Metazoa; Chordata; Craniata; Verrebrata; Eutelgostomi;
                                                                                                                                                                              115.4 GOALCACAGACATACAAACHTOG - AGTICGCTTGTATTACCGAGTAATGGAATCCATGC 1210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1482 AFGATGFGAAGATGGAATGGAATGGCTTGGATGGGTGTGAGATTFAGGTTTATFTGA 1541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1602 TOTIAATOTIGGIGIGGAGAATAATGACAGGAGATATGIATGITTGIGGAAA 1661
1093 ATAGGAFACATCTTTAAAGAAAATTGGTAAAGGTGTGGGGACAGGGTTGTGTGGAAATT 1152
                                                                                                                                                                                                                                                                                                                                                             1211 TEAAATCAGAAGAAGAACGATTATCCATTCAAAATTTTAGCAAACTTCTGAATGACAA-C 1269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1542 TOTTATTAAACAATOAAAGGACCGAGAAGGACCAAACTGATCACTIGAAFCTGGTGT 1601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   eDNA Library Preparation: Life Technologies, Inc. (CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequenting by: Aquenour Edoscience Corporation Clone distribution. MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7.1 HOLFATTAAAGAAFGAAAGAAGGAGAAAGACCAAGTGATCACCTTGAATCTGCTTGFCC 132
                                                HER GRAND HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NIH MGC http://mgc nei nih ges/
Mutional Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             125 TITATICAGAAGAAGACATTATCCATTCAAAATTTTHGCACACTTCIGAATSACAAGC 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20.1%; Score 678; DB-13; Length 835; 100.0%; Pred. No. 1.8e-122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1270 ATTITICATATGICITITATIGGCGTCCGCGCTCTGAGGTTGTAT 1313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mKNA
                                                                                                                                                                                                                                                                                                                                                                                                                   244 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  http://image.llnl.gov
Plate: LLAM12205 row: e column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tissue Produrement: ATCC/DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib-"NIH_MGC_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   845 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop: 647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xrel-"taxon:9606"
/clone-"IMAGE:5528814"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: eqapbs remail with qevy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     147 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ..
e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RM454724.1 GI:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 845)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MKNA Sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8.15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          254 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14M45 47.24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HM451724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  h iman.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 678;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NEED IN LESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HASS CHUNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PESOLT 11
BM45.37.24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOHNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIWW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KI:JN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOUTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                       25
```

```
EST 11-00T-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
Eukaryota; Metazoa; Chordata: Craniata; Vertebrata; Euleleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6033422330Fl NIH_MGC_90 Home suriens con close iMANE:5402622 57,
                                                                                                                                                                                                                                                                                                           1842 TGAGGACCCAGAATTAGAACATATCATCTGGAGCCTTTTCCAGGAAAAAAA 1901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1962 ATGCAAAGTGAAGAATATAGACCTTAAATTCAAAATCATTGTAAGAGAATATATAGAAGATAT 2021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2022 TCCTCATGCTGTTCAGGAGAGATTCAAACGTGTTTTAALCAAAGAAGAGGGTALGAFTC 2081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2082 TATTATAGIAITGIAIAACTCSGTGTTCATGSAGANTSAAAANAAAIALLLS AGTA 2141
                                                                                                                                                                                                                       1782 TAAAAAAGTGTATCGGCTAGCCTATCTCCGGCTAAATACACTTTGTGAACGCCTTCTGTC 1841
                                                                                                                                                                                                                                                                                                                                                                                                 1902 GTATGAACTCATGAGAGAGAAGTTTGGACCAAAFTATGATGTGTLCCATGTAFGAGGAF 1961
                                            1662 ATCTCCAAAGAAAAGGTTCAACTACGCGTGTAAFFCTACTACTAAFFCTAAAAAAAA 1721
                                                                                                                               1722 AGCAACCICAGCCIICCAGACCCAGAAGCCATIGAAAICTACCICTCTICACTGIPTIA 1781
                                                                                                                                                                                                                                              493 ATGCAAAGTGAAGAATATAGACCTTAAATTCAAAAATGTTGTAAGAGGATAGAAGGATGT 552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLNL at:
133 TOTITALCITOCOLOGNANAIAALOACA GGCAG AGAIALGIAH HIFOTOTOIAAG 192
                                                                                     193 ATCTCCAAAGAAAAAGGTTCAACTACGCGTGTAAATTCTACTGCAAATGTAGAGACAA 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                    CDNA Library Preparation: Lite Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mammalia, Butheria, Primates, Catarrhini, Homiridae, Homo.
                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /tissue_type-"adenocarcinoma, cell line"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mPNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   http://image.llnl.gov
Plate: LLAM12026 row: k column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib-"NIH_MGC 90"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 672)
NIH-MGC http://mqc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               High quality sequence stop: 668.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               672 hp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /elone="IMAGE:5402622"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: eqapbs-r⊄mail.nih.gov
Tissue Procurement: A160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HI868359.1 GI:15042032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2142 TCCTTCCACCACCCCCC 2159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               673 IGCTTCCACCAGGCCCC 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BI868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               H1868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B1868459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  · FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                              ć
                                                                                                                                                                           q
                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                             ó
                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      οŻ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90
                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
```

```
HTC 19-JAN-2002
/lab_bost="nHIDH (phage-resistant)" //lab_bost="Digam: liver; Vector: pGMV SPORT6, Site_1. Not!, Site_2: Sall; Cloned unidirectionally; Align dT primed. Average laser, size 1.7 kb. Library enriched for tull-length clones and constructed by Life Technologies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Akoli246
Mus musculus 10 days embiyo whole body ebna, Rikku full length
enriched library, clone-26,00017M22-refingblastoma 1, full insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2782
                                                                                                                                                                                                                                                                                                                             ZE43 ATALLICACCCTGAAGAGTGCATALAAAATTTGAGAAGGTGTGGGAAGAGGGAAGAAAAA 2302
                                                                                                                                                                                                                                                                                                                                                                                                                                63 TOTALIAAATAAATOAGATATGTAATGTAAOAAGOGAGGTGTGTAAAAAAGAGTGTGGAGG
2422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2483 CAGATGGAAGTAAACATCTCCCAGGAGAAGTTTTGAGGAAATTTGGGAAATTGGGAAATTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZAUR AGGARGARAAAAAAATGAGGATGEGAGGAGGTTGGTGGAGTGFGTAGAGGCCCCCGGATTCATT 2662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2463 GICTOTOACAGATGTGACTGTATAACTTTCCCAGGTTCTGTTTATGGCCACATTTAATAT 2722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2543 CITCTACTCGAACACGAATGCAAAAGCAGAAAATGAATGATAGCATACGATACCYVAAACA 2602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          842 BATTIAAAAAGTIGTAGAGATIGTIGGIGTTGGAAAGTAAAAITGEFGFGGGTTAIGG 2901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5] IGACIOCAAGAICAAAAATCITAGIAICAAATTGGIGAATGATTOGGGACTTOTGAGAAGT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12] ICCAGAAALAAA ICAGATGGTATGTAAÇAGGGAOÇGTGTGAAAAAAAAAGAAGTGGTGAAGT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (0) CTICTACTICGAACACGAATGCAAAAGCAGAAAATGAATGATAGCATGGATACCTCAAACA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481 GIICAGCTCTITTTGTGGATAFAAATGTAGAAATTGTAATTGTAATTGGTTGATGTGATTTGTAAGG 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      541 CACITGAAATGTTAGTCATTGITATTTATA'AAGATTGAA'AATGTGTAAAAFS'HGC 600
                                                                                                                                                                                                                                                                                                                                                                              2783 CACTIGAAATGI FAGICATHGITATHTAFACAAGATFGAA - AAHCTFGTGFAAAHCCFGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (strain-057H176J) 10 days embryo comA to mRNA, clone_lib:RIKEN full-length enriched mouse comA library
                                                                                                                                                                                                                                                                                   -:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19.5%; Score 660, DB 13; Length 672; 99.9%; Pred. No. 6.1e-119; tive 0; Mismatches 0; Indels
                                                                                                                            Note: this is a NIH_MGC library "
                                                                                                                                                    186 t
                                                                                                                                                 131 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AK011246.1 GI:12847243
                                                                                                                                                      124 0
                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2902 AIAGIAAGAAIG 2913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         661 ATAGTAAGAATG 672
                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                         m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sedirence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AK011246
                                                                                                                                                                                                                                                                         Matchos 671:
                                                                                                                                                                                                                               There Watch
                                                                                                                                                                                                                                                       Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULI 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYW PILS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AK011246
                                                                                                                                                                           N ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   L #108
```

3

5

ŝ

Š â

÷

```
Fawai, T., Shinaqawa, A., Shibata, K., Yoshino, M., Iloh, M., Ishii, Y., Arakawa, T., Bara, A., Fuk.mishi, Y., Konno, H., Adachi, J., Fukuda, S., Arawa, K., Izawa, M., Nishi, K., Kiyosawa, H., Yamanaka, I., Saito, Y., Yamanaka, I., Saito, Y., Kadota, K., Matsuda, H., Ashburner, M., Batalov, S., Casavant, I., Fulschinn, W., Casarland, I., Gissic, K. King, B., Nochiwa, H., Kuehl, P., Lewis, S., Marsuo, Y., Nisaio, I., Kuehl, E., Lowis, S., Marsuo, Y., Nisaio, I., Fucuki, K., Tomita, M., Wagner, L., Washio, T., Sakai, K., Okido, T., Furno, M., Aoho, B., Haldarelli, R., Harshi, T., Sakai, K., Okido, T., Furno, M., Aoho, B., Fucther, C., Pulita, M., Garibeldi, M., Custincich, S., Hill, D., Fucther, C., Pulita, M., Caribeldi, M., Lee, N. H., Lyons, P., Marchionni, L., Mashima, J., Macchini, J., Monbasils, F., Murdan, J., Kamiga, M., Lee, N. H., Lyons, P., Marchionni, L., Mashima, J., Mazzarelli, J., Monbasils, F., King, B., Riqwaid, M., Rodrignez, I., Sakamoto, N., Sasaki, H., Sato, K., Schobash, C., Wilming, L., Warsh, Weitz, C., Whitaker, C., Wilming, L., Wynshaw, Meris, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Carnine!, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Ttoh, M., Komo, H., Okazaki, Y., Muramatsu, M. and Hayashiraki, Y. Normalization and subtraction of cap-trapper-selected cutAs to prepare tull-length cDNA libraries for rapid discovery of new genes Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Adachi, J. Aizawa, K. Akahira, S., Akimura, T., Aono, H., Arai, A., Adachi, J., Aizawa, K., Akahira, S., Akimura, T., Aono, H., Arai, A., Arakwa, T., Baldarelli, R., Bono, H., Brownstein, M., Bult, C., Carninoi, P., Fukuda, S., Fukunishi, Y., Furuno, M., Hana, A., Hayatsu, N., Hill, D., Hiramoto, K., Hidoka, T., Hori, F., Hura, A., Hayatsu, N., Hill, D., Hiramoto, K., Hidoka, T., Saukawa, H., Kato, H., Kawai, J., Kouda, M., Koya, S., Kurihara, C., Maisuyama, T., Miyazaki, A., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Quarkenbush, J., Solin, H., Salio, B., Sakai, F., Sakai, F., Sakai, F., Sakai, F., Saki, B., Saki, Shinagawa, A., Shinaki, F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Shibata, K., Itoh, M., Aizawa, K., Naharka, S., Sasaki, N., Carrinci, F., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishiro, T., Pakamura, S., Rasana, M., Nishine, T., Harada, A., Yamamoto, R., Matsunoto, R., Sakaquehi, S., Ikeqami, T., Kashayaji, K., Fujiwake, S., Inoue, K., Toqawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Ianaka, T., Matsuura, S., Kawai, J., Yasazaki, Y., Muramatsu, M., Hoody, Y., Kia, A., and Hayashizki, Y. FIKEN integrated sequence analysis (RISA) system 384-tormat sequencer in the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the sequencer of the s
                                                                                                    Eukaryotu, Motazou, Chorduta, Craniata, Vertebrata, Eutheleostomi,
Mammalia, Eutheria, Rodentia, Sciuroqnathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (10.101 2000) Yoshibide Huyashizaki, The Institute of Physical and Chemical Research (KIAEN), Laboratory for Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and Hayashizaki,Y.
Functional annotation of a full-length mouse cDNA collection
Nature 409 (6821), 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sejake, V., Suzuki, H., Tajami, M., Tajawa, A., Takahashi, F., Tanaka, T., Toya, T., Yamamura, T., Yamanaka, L., Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M., and
                                                                                                                                                                                                                                                                                                                                     High efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
99279253
                                                                                                                                                                                                                                                                                      Carningi,P. and Bayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
close:2600017M22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hayashizaki,Y.
                                                           Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21085660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20499374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1121785
                                               ORGANISM
                                                                                                                                                                                                                                                                          Authops
                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFFRENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPROPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDI INE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOUPNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDI.INE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TVNdmor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITE
                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
```

```
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESUL1 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BE539278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20001
                                                                                                                                                                                                                                                              â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Οp
                                                                                                                                                                     ÖΧ
                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Exploration Research Group, RIKEN Gemomic Sciences Center (GSC), RIKEN Yelchama in a 22 Stelloo box, Tsundi ku, Yokohuma, Kanangawa 2 40 0045, Japan (E-mai) genome-resease.riken, go.jp, URLihttp://genome.gsc.riken.go.jp/, Tel:81-45:503-9222,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zelone lib "Riken full-length enriched mouse cona library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /translation="MPPKAPRRAAAAEPPPPPPPPPPPPPPPAUDAQDSGPEELPLARLEFF
ETEEPFFTALCOKLKVPUHVRERAWLTWEKVSSVDGTLEGYTQKKKELWGTCTFTAAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEDEMPETETELQKSTFTSVYKFFFILLKETFTSTKVFNAMSPELKKYNVE/ALYSKEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RICELIYLJOPSSALSTELNSMLVLKISWITFILLAKGEVLOMEDDLVISFOLMLCVVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CNIDEVENVYERNETPEINSLGIVSSNGLEEVESLSKRYEEVYLKNKDLDARLFUDHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KTLOTOP IOSPETEKTPRKNNPDEEANVVTPHTPVKTVMNTIQQLMVILNSASDQPSE
NLISYENNCTVNP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YETKESPPALLIKEPYKTAALPINGSPRTPRRGONKSARTAKQLENDTRITEVLOKEHE
                                                                                                                                                                                                                                                                                                                                                      cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Scrences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        prepare mouse lissues. First strand cDNA was primed with a primer [5] GAGAGAGAGAGATGCAAGAGTGTTTTTTTTTTTTVN 3'], cDNA was
                                                                                                                                                                                                                                                              Please visit our web site (http://genome.gsc.riken.go.jp/) for
further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HELL HELL HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HELLE HE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           157 GAAACAGAGACCIGATTIJACIGCATTAIGICAGAAATTAAAGATACCAGAICATGTC 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       217 AGAGAGAGAGTTGGTTAAGTTGGGAGAAAGTTTCATCTGGGGAGGAGGAGTATTGGGAGGT 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           44.1 AGAGAAGAGTI GGCTAAGTI GGGAGAAG FITGA FCCGFGGAFGGAAFGFFGGAAGGA 4.9.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    277 TATATTCAAAAAAAAAAGGAACTGTGGGGAATCTGTATTATTGGAGGAGTTGACCTA 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97 GAGGACCCAGAGCAGAGAGAGCCGGGCGGAGGACCIGCCCCCGGGCCTGAGCTTGAAA 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels 177; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17 demarcadeacementalementales de acceptado de contraces de contracementales en 16 demarcados de contracementales en 16 demarcados de contracementales en 16 demarcados de contracementales en 16 demarcados de contracementales en 16 demarcados de contracementales en 16 demarcados de contracementales en 16 demarcados de 16 demarcados de contracementales en 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 demarcados de 16 dema
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19.1%; Score 646; DB 11; Length 1364;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note-"data source:MGD, source key:MG1:97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 3.2e-116;
9: Mismatches 120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ath_xret "FANTOM_DB:2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      146 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /dev_stage="10 days embryo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               xret-"MGD:MGI:1905260"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref-"MGD:MGL:97874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start=1
/protein_id="HAB27493.1"
/4b_vrot="G1:12847244"__
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism:"Mus_musemlus"
/strain="e5781/69"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db xret:"taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and inn/qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₹07 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone-"2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 evidence: 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /qene "Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 36.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  74, 18;
                                                                                                                                                                                                                 Fax:81-45-504-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 46,4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   out at ive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HOST: SOLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 905;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                guery March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOUTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FFATHRES
                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   î
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
```

```
1221 09 AUC 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601063567F1 NIH_MGC_10 Homo sapiens conv clone IMAGE: 449873 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1303 TCTGCAAGTGATCAGCCATCAGAAAATCTGATTTCCTACTTCAATAATTGCAVA3TGAAT 1462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              943 ACGAGGATTATCCAGGCTTCTCTCTAAACAACACAGTGTAATATAGATGACGCTGAAAAAT 1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1003 GITTATITCAAAAATITIATCGCTITITATAAATICACTIGGAATTGTATCGTCTAAIGGA 1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1243 CCACACACTCCAGTTAGGACTGFTATGAATACTATTCAACAATAATTGGTGATTTAAAT 1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6,6,6
463 GATGAGATGCATTCACTTTTACTGAGCTACAGAAAGCATAGAAACOACTCTATAAA 522
                                                                                                                                                                                                                                                                523 TICTITGACTIALLAAAAGAAATCGATACCAGLACCAAGGTTGATAATGCLATGTGAGA 582
                                                                                                                                                                                                                                                                                                                              457 CIGITGAAGAAGIAIGAIGIATIGITTGCACITCITCAGCAAATTGGAAAGGACATGIGAA 516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   56.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          703 CTAAAAATTTCTTGGATCACTTTTTTTACTAGCTAAGGAGAAGTATTACAGATGGAAGAT 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             763 GACCIGGTAAICICAIIICAGCIAAIGIIGIGIGIAGIIGACITAIITIAIIAAGIICIA 822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -CCCATTAATGGTTCACCT 579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            823 CCTCCTGCACTACTCAGAGACCATACAAAACAGCTGCACTCCCCATTAATGGTTCACCT 882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          640 ACAAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAAT 699
                                                                                      337 GATGAGATGTCGTTCACTTTTACTGAGCTACAGAAAACATAGAAATCAGTGTCCATAAA
                                                                                                                                                                                                        897 ITCTTTAACTTACTAAAAGAAATTGATACCAGTACCAAAGTTGATAATGCTCAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        700 GTTTATTTCAAAATTTTATAGCTTTTAIGAALIGIGIAGAATTGIAACATCTAATGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           260 CITCCAGAGGIIGAAAAICIIICIAAAACGAIACGAAGAAAIIIAICIIAAAAAIAAAAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             820 CTAGATGCAAGAITAITIITGGATCATGAIAAAANTUTICAGACTGAITCIALAGACAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1123 TTAGATGGAAGACTGTTTTTGGATCATGATAAAACACTTCAGACTGATCTATAGACAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   880 TTTGAAAGAGAGAAGGGGAGGAAAAAGTAACGTTGATGAAGAGGTGAATGTAA FTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     940 CCACACACTCCAGTTAGGACTGTTATGAACACTATCCAACAATTAATGATGATTTTAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1000 TCAGCAAGTGATCAACGTTCAGAAATCTGATTTCCTATTTTAACAACTGCACAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                History
                                                                                                                                                                                                                                                                                                                                                                                                                                          517 CTTATATATTTGACACAACCAGCAGTTCGATGGTCGCTGTTATA-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RENA
                                                                                                                        dq 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BE539278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1060 CC 1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1363 CC 1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    293
```

```
RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                       BG616219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                   à
                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                   :5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /morfel"Organ, servix, Vactor, pCMV SPORT6, Site_1: NotT; Site_2: Salt, Cloned unidirectionally. Frimer, oliquid Taverage insert size 1.5 kb. Library prepared by Life rechnologies.
                                                                                                    Eukaryota; Metazoa; Chondata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2393 TATTOTATAACTOGGTOTTCATGCAGAGTGAAAAAAAAATATTTGCAGTATGCTTCCA 2149
                                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D.

Gontact: Robert Strausberg, Ph.D.

Enail: crapts remained Arcc

cinnal library Proparation: Life Technologies, Inc.

cinnal library Arrayed by: Incyte Genomics, Inc.

DNA Sequencing by: Incyte Genomics, Inc.

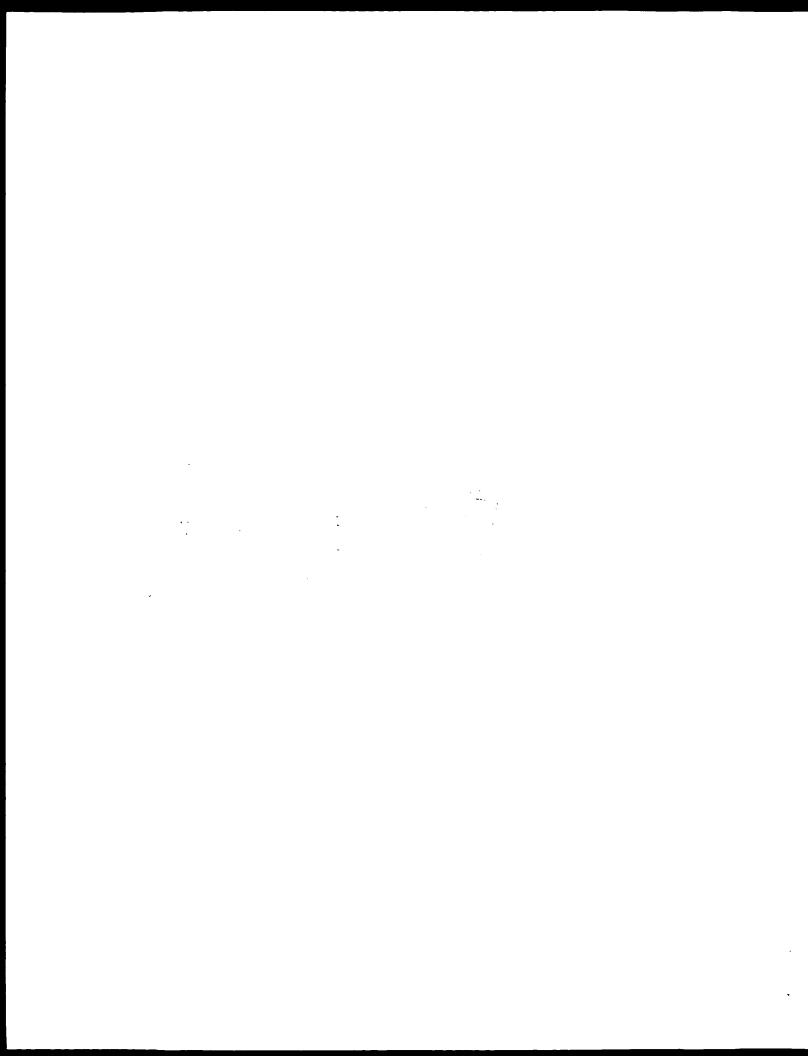
DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2150 PPARAMPREMETARGITGICARCANIACCICACATICGICGAAGGCCTIACAAGTITGCIA 2209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LL10 GIICACOCTIACGGAITCCIGGAGGGAACAICTAIAIIICACCCCIGAAGAGICCAIATA 2269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2270 AAATTICAGAAGGTGTGCCAACACACAAAAATGACTCCAAGATCAAGAATGTTAGTAT 2329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.33 SANTEGERANTCATICGGGACTICTGAGAAGTICCAGAAAAIAAAICAGATGTATGTA 2389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2,390 ACAGGGACGGGGGGGTGAAAAAAAAAAAAGGAAGGAA-GGGTGGTAAAAGGAA 2448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60 TATICIATAACICGGICTICAIGCAGAGAGAAAAAAAAATA-TITGAAGIAIGCTICGA 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            239 AAATTTCAGAAGGTCIGCCAACACCAACAAAAATGACTCCAAGATCATAT 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          359 ACAGGGACCGTGTGTTCAAAAAAAAGGTGGTAAAGGGCTGCTAAAAGGAAAA 418
                                                                                                                                                                                      National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cabs
                                                                                                                          Mammalia; Eutheria; Primates: Catarrhini; Hominidae: Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      c,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19.1%; Score 643.6; DB 10; Length 797;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      indels
                                                                                                                                                                                                                                                                                                                                                                 lound through the I M A G E Consorthum/LLNL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. 9.8e-116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             207 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .797
Antanism="Bown sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone "IMAGE. 1449873"
/clone_lib "NIH_MGC_10"
/cell_line="MGC36"
                                                                                                                                                              NIH-MGC http://mgr/mri nih gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                  High quality sequence stop: 696.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             167 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                     .ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /lab_host+"DH10B"
                   BE549278.1 GI:9767923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 95.8%;
                                                                                                                                             (hases 1 to 797)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 747; Conservative
                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E 222
                                                              human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hest [1003]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80011CE
                                                                                 ROUNDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HASE COUNT
                                                                                                                                             REFERENCE
AUTHORS
A.Y.ESSILON
                                                                                                                                                                                                       DOCKNAL
                                          KLYW RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                   VERSION
                                                                                                                                                                                      . MMEN!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RICIA
                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
```

```
/note="Organ: testis; Vector: pDNR-LiB (Clontech): Site_1: Sfil (ggccgcctggcc); Site_2: Sfil (ggccattatqcc): Double-stranded cDNA was prepared from cell line RNA. S' and a and a adaptors aceed used in cloning as lollows: Sadaptor sequence S-CATGGGCTATTATGGCT.3 and 3 adaptor sequence S-CATGGGCTATTATGGGCT.3 and 3 adaptor sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BG616219 681 bp mRNA linear ESI 18-APR-2001
F0zh44717E2 NIH_MB7_61 Homo sapiess cDNA clene IMA:E-4775342 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence: § AITCIANDOCANDODECTANTS-41(40)pn-3/
(where H = A, C, old and N = A, C, old old). Avorage
insert size 1.75 kb (range of 4.0 kb) 15/15 relenting
contained inserts by PCP, this library was entiched for
full-length clones and was constructed by Clontech
Laboratories (Palo Alto, CA). Note: this is a NHLMGC
Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Euteleostomi:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2748 APCHOCACARCCAAFFOTFFCGCTGAFFCCTAAGCCACTTGAAATGTTAGTCAFFGTTAF 2807
2509 GAGTOTAAATTIGAGTAGAAAGIGGGAGAAATGACTICIACICGAACA-CGAATGCAAAA 2567
                                                                                                                                                                                                                     2628 OPTEGOLOGACAPTOTESTAPAPPTTTSATTPALITISTICTICTEACAGATGTGTALAA 2457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2688 CIIICCCAGGIICIGIIIAIGGCACAIIIAAIAICIICAGCICITIIIGIGGAIAIAAA 2747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lown Library Arrayed by. The I.M.A.G.E. Consortion (ILML) DNA Sequencial by Inc. 2.M.A.G.E. Consortion (ILML) Clone distribution; MCC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  [HITTH HITTH FS9 of transactor and contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar of the contrar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        539 G.AGAAAAATGAATAATAATAATAGATACTCAAACAAAGAAAAGAAAATGAGGATGTCAGGA 598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mammalia, Butheria, Prinates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 681)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Fimal: cyapbs rfamiliah.gov
Tissuc Procurement. AlcC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 542.2; DB 12; Length 681; Pred. No. 1.9e-115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
Eukaryota, Metazwa; Chordata, Cianiata, Vertebiata,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type-"embryonal carcinoma"
/lab_host="DH10B (T1 phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           259 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plate: ALCM 650 row: b column: 05 High quality sequence stop: 679.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="!MAGE:4775332"
/clone_lib="NIH_MGC_61"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     104 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HG616219.1 GI:13667590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19.08;
98.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           108 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HG616219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Net INITES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESS 10N
```

2691	PCCYAGGICIGITIATGOCAYALTIAAFACTICAOCTETTITGOGATAFAAATG 27 TITTITTITTITTITTITTITTITTITTITTITTITTIT	50
2751	TOPAGATOCAATTGTTGGGTGATTCCTAAGCCACTTGAAATGTTAGTAGTGATATTTA 2 	2810 119
2811 120	TATAAAH HEARAATTI HERELEH HERELEH HERELEH HERELEH HERELEH HERELEH HERELEH HERELEH HERELEH HERELEH HERELEH HERELEH HERELEH HERELEAAA GANTATOT TOTAAAAA GETOT TAAAAAA GETOT TOTAAAAA GETOT TOTAAAAA GETOT TOTAAAAA GETOT TOTAAAAA GETOT TOTAAAAA GETOT TOTAAAAAA GETOT TOTAAAAAA GETOT TOTAAAAAA GETOT TOTAAAAAA GETOT TOTAAAAAAA GETOT TOTAAAAAAA GETOT TOTAAAAAAA GETOT TOTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	2870 179
180 180	TOTTOPAAADTAAATTOPTOTOPTITATOOATAGTAAGAATGGGCCTAGAGTGGGAGTC 2 FILLELLE FILLELLE FILLE 2930 235	
29.41	CTGATAACCCAGGCCTGTCTGACTAGTTTGCCTTCTTTTGTAGCATATAGGTGATGTTTG 	2990
1991	CTCTESTITITATIAALICATATOTATATITITITAATITAACAGAGAGGGGAGAGAGAAGAGA	3050 359
1051 150	A DEGLECTA LETA L'ETRA A DE PARTEGATE GAZEGNOCA LE CANGARANTTA LCC 311 ELLETTETTETTETTETTETTETTETTETTETTETTETTE	3110 419
4111	TGAAVTETTETTETAAAAATGGATATTATTAGAAATTAGAAAAAAAA	3170 479
4171	ALTAZALTITALTITACIATIOGAARCIGARATACIGIGGROCTICITITATAAAAFTTTG 323 	3230 539
540	CTITE ANTIANATANAND GGANGCAND ATANCATATGATACTATGATACT 3 THE TITLE THE THE THE THE THE THE THE THE THE TH	3288 599
4283	GAAACNIATITCATALCICATANATGTAAAAGAACTTACTGATTATTITCTICATCCAACT FEFFER FEFFER FEFFER FEFFER FEFFER GAAAGAAGAAGAACTTACTGATATTITCTICATGAAGGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAG	33 48. 659
1143	TATCITITIAAATGAGATIA 3369 FELLELE II TELLE TATCITITAAATGAGAATTA 680	

Secrets completed; January 18, 2003, 04:10:44 5.b time: 2992.4 secs



```
Copyright (c) 1994 - 2003 Compagen Ltd.
```

nucleic search, using sw model M nucleuc

January 16, 2003, 15:20:22 ; Scarch time 2974-37 Seconds (without alignments) 18469.506 Million cell updates/sec Mun on:

US 09 026-459A:30

inthe: Perfect score;

1 GCCATGATGGATTTTACTGG......AAATGAGGATTATTGATAGT 3392 IDENTITY NOW Gapon 1.0 Seoring table: Sequence:

16154066 seqs, 8097743376 residues Searched:

\$2408145 folal number of hits satistying chosen parameters.

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

em_dss_mus:* em_dss_other:* em_dss_pro:* em_dss_bum: *
em_dss_buv: *
em_dss_pln: *
em_dss_vft: *
em_qss_lun: *
em_dss_lun: * em_estiun:* em_eston:* qb_qss:* em estmu;
em_estov;
em_estov;
em_estro;
em_bte;
em_bte;
em_bte;
em_bte; em_esthum:* em_estin:* em_estba:* qb_est 4;* qb est4:* qb est5:* #: <u>| S</u>

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

• Hodss rod: •

SUMMARIES

					COLUMN TOUR	
		*				
4.01		Ourry				
ž	Sector		Match Length DB 1D	ž	=	Description
_	910.2		1024	-	HM450641	TATE OF THE PROPERTY OF THE PR
7	4.606	26.8	1051		1051 13 BMS61083	BM561083 AGENCOURT
~	879.B		146.4	11	AR011246	AK011246 Mus muscu
-7	856	7.37		7	BQ439221	BO4 49221 AGENCHURT
<u>,</u>	844.8			7	BQ220275	BORRORY ACENCOURT
,	786	24.2	1001	~		HM475603 AGENCOURT

25.4 22.2 1122 13 99.6 6 99.6 2 20.6 2 99.6	BM545881 AGENCOBEL A1797813 DKEZD4130	BULLILLY AGENCOURT	B3610661 602611848	ALS6 4757 ALS6 4757	B 75.76456 662591412	BM466194 AGENCHURT	HM454724 AGENCOURT	BIR68359 603392430	RE539278 601063567	B3616219 602644717	HM264009 iq33108.x	HE082846 RC2 HI064	AWSB31Bl (allh09.y	Al. 599644 DKFZp414P	BC779129 1 605 (645)	ALS99105 DKFZp413G	AA76.4411 vw54a04.1	AW468244 CM4 H1018	AA764485 vw54h01.r	AWTH2967 1a08e08.y	ALC92790 DKP2p414I	ALL 2094 1 DKF2p762D	BID 31236 MRO HT015	AV715544 AV715544	BF144857 601790343	BI151568 602916108	A1646038 VW54a10.x	AAZ58255 zr59q04.r		AW502887 UI-HF BNO		B1821116 603035591	IM4 SE72B AGENCHURT	F1526268 588927181	NUS 44784 RC 4-H1094	A1093215 qb04a02.x	AL598766 DKFZp414F	BE865749 601678131
752.4 22.2 1122 725.4 22.2 1124 725.4 21.4 727 725.4 21.4 727 698.2 20.6 824 678.2 20.4 972 678.2 20.4 972 678.2 20.4 972 6614 19.5 672 6114 19.5 672 6114 19.5 672 6114 19.5 672 6114 19.5 672 6114 19.5 672 6114 19.5 681 6114 19.5 681 6814 19.5 681 6814 19.5 681 6814 19.5 681 6814 19.5 681 6814 1	BM545881 ALS97811	RG222227	BG610661	AL564757	BG570156	BM466194	BM45 4724	B1868359	BE539278	BG616219	BM264009	HE082846	AW58 4181	AL599633	BG25 454 4	AL599105	AA763411	AW 168214	AA763485	AW582967	AL692790	AL120941	HE941236	AV715511	BF144857	BI151568	A1646048	AA258255	BG149050	AW502887	BE168095	B1821116	BM456728	181526982	BU934784	A1093215	AL598766	BE865749
7.52.2.4 212.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2																																						869 12
	다. 다.드	다.	20.6	20.6	20.4	20.4	20.02	19.5	19.0	18.9	18.2	18.1	17.8	17.8	17.6	17.1	17.0	16.7	16.5	911	15.6	15.6		15.1		14.9	8.	14.6	14.3	14.3		<u>ر.</u>					13.5	1 1 . 4
4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	725.4	720.6	9.669	698.2	692.2	691.8	678	660	643.6	642.2	617	614	605.2	605	596.4	580	575.2	566.4	558	ପ ଚୁନ୍ଦ ଜ	5.40	α 	515.8	513.2	512.2	505.2	502.4	493.8	486.4	84	481.4	480.2	476.6	474.4	459.2	457	457	454.2
	- œ	J	10	11	2	-	<u>:</u> :	15	16	17	38	2	50	2.1	급	23	24	2.5	26	C1	58	ۍ. د۱	30	- ;	્ય જ	en :	3 1	<u>د</u>	36	3.7	30 F	6	4	4]	C4 ₹*	4.3	44	4 5

ALLCINMENTS

RESULT 1 BM450031 DOCUS DOCUS DEFINITION ACCESSION VERSTON VERSTON VERSTON ACTRONS SOURCE ORGANISM AUTHORS TITLE JOURNAL COMMENT FIRE SOURCE SOURCE SOURCE SOURCE SOURCE SOURCE SOURCE SOURCE SOURCE SOURCE SOURCE SOURCE SOURCE SOURCE SOURCE SOURCE SOURCE		BM450031 AGENCOORT 6393544 NIH MGC 72 Homo Sapiens CLNA CLORE IMAGE:5528037	5', mrna sequence.	BM450031	BM450041.1 GI:18499071	EST.	human.	Homo sapiens	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.	l (bases 1 to 1023)	NIH-MGC http://mae.nci.nih.aov/.	National Institutes of Health, Mammalian Gene Collection (MGC)	Unpublished (1999)	Contact: Robert Strausberg, Ph.D.	Email: cgapbs-ramail.nih.gov	Tissue Procurement: ATCL/DCID/DTP	cDNA Library Preparation: Lite Technologies, Inc.	CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)	DNA Sequencing by: Agencourt Bioscience Corporation	Clone distribution: MGC clone distribution information can be	found through the L.M.A.G.E. Consortium/LLNL at:	http://image.llnl.gov	Plate: LLAM12204 row, d column, 22	High quality sequence stop: 643.	bovation/Qualifiers	
	RESULT 1 BM450031	DEFINITION		ACCESSION	VERSION	KEYWORDS	SOURCE	ORGANISM			REFERENCE	AUTHORS	TITLE	JOURNAL.	COMMENT		-									FEATURES	SOURCE

```
/clone "IMAGE:55200.)
/clone_lib=NNIH_MGC_72"
/clone_lib=NNIH_MGC_72"
/clone_lip=NNIH_MGC_72"
/close_lost="Organ: skin: Vector: pcWV-SPORT6: Site_1: Not1:
/close_lorgan: skin: Library constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed by Life_1: Accordance of the constructed b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.50 HOCARAGOCOCOTACOTISTARCATACOTACACAATACOTOGAACACOCITACAACIT 2219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           THRD CAAAGIGAAGATATAGAGGTTTAAATTGAAAATGATTGTAAGAGGATAGAAGGATGTTGG 2039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2100 TATAGLATICTAFAAGTGGGRGTGGGRGAGAGAAACAAATATTGGAGTATGG 2159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2220 TCCIAGTECACCCTIACGGAITCCIGGAGGGAACAICIATAITICACCCTIGAAGAGICC 2279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2450 GAAAAAATIACCTTTGATATTGAAGGAGGAGGAGA GGAAGIAAAGTGTGGG 2519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2/20 AGGASATTOAAA ITTOAASAAAAAAASAAAAAAAAAAAATGAGTOSAAGTOSAAAGAAAAAAAA 2579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2644) GGACCT LGGEGACACTGTGTACACTGTGTATGATTGATTGTCTCTCACAGATGTGTA 2649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2700 FAACTITCCCAGGFICTGTTTTATGGGCACATTTAAFATCTTCAGCTCTTTTTGTGGATAT 2759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2760 AAAATGTGGAAGATGGATTGTTT GGGTGATTGCTAAGGCATTGAAATGTTAGTGATT 2817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 ICATGCTGTTCAGGAGAGAFTTCAAGAGAAGAAGAAGAGGAGTATGATTCTAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541 AGGAGACITCAAATTTCACCAGAAATTGACAAATGAGTTCTACTCGAACACGGAATGCA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661 GGACCITGGTGGACACTGTGTATCTGTGAATTTATTGTCTCTCACAGGTGTGAATGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DR 13; Length 1023;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches 43; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26.8%; Score 910.2; DR 13
95.2%; Pred No 2 5e-165;
                                                                                                                                                                                                                                                                                                                                                                                                 281 t
                                                                                                                                                                                                                                                                                                      Average insert size 2 kb
Technologies."
197 a 281
/organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             972; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                 ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Courty Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                      ž
S i G i N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>2</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>:</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
```

```
HM5610R3 | Hear HS1 20-FHB-12002 AGENCOURT_5566133 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:5550905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Onally. Primer, Oligo dl.
Library constructed by Lite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
Eukaryota; Metazoa, Chordata, Craniata, Vertebiata, Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                961 AAABSSRASEDISAAIAPPRAASSPISPPRANIACIIIISSSIICIIEGSIAAAA 1020
                                                                                                                                                                                                        2934 AGAGIGGGAGIOCIGAIAACOTTAGOTTGTATATIATIIIGGGIIGIIIGIIAGGAIAI 2993
2818 GTTPATTATAGAAGATTGAAAATGTTGTGTAAATGGTGGCATTTAAAAAGTTGTAGGAGA 2877
                                                                                                     2878 TEGETT - GYPYTEGYAAAGTAAAATGGTGTGYGYFTATGGAATAGTAGGG----CCCT 2933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1138 AAAAJIGIGGGACAGGGIIGIGIGGGAAATIGGAICACAGAGAAAATIGGAAGTIGGAGTIGGC 1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1198 TTGTATTAGGGAGTAATGGAATGCATGCTTAAATCAGAAGAAGAACGATTATGCATTGAA 1257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1258 AATTTTAGCAAACTTCTGAATGACAATTTTTCATATGTCTTTTATTGCCGTGCGCCTTT 1317
                                                                                                                                                     901 TEGETERGOCIOTECTACCAAGEAAAATGCTGTGCCTTATTGGATAGAAGAAAIGGCCCCTA 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONA Library Preparation: Life Technologies, Inc. CNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Apparount Bioscience Corporation Clone distribution: MGC clone distribution information on be found through the L.M.A.G.E. Consortium/LLNL at:
                                                  841 GIIAIIIAIACCAGAIIGAAAAICIIGIGIAAAICCIGCCAAITAAAAAGIIGIAGOAGA 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /lissue_type="retinoblastoma"
/lab_bost."DHIOB (phage resistant)"
/note="Organ: eye; Vector: pGMV-SPORT6; Site_1: Not1;
Site_2: Saii; Ciofied unidirectionally. Frince: Slys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 TERTAL MARKETAATERAATERATERAATERAATERAAGAAGAATATERATERAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2, Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26.8%; Score 909.4; DB 13; Length 1051; 98.4%; Pred. No. 3.5e-165;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      !ndcis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Average insert size 1.75 kb. Technologies."
                                                                                                                                   299 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    http://image.llnl.gov
Plate: LLAM12263 row: m column: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone_lib-"NIH_MGC_67"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 1051)
NIH-MGC http://mgc nci nih gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone-"1MAGE:5550905"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref~"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     197 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      o,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BM561083.1 GT:18806043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        221 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5', mRNA sequence.
BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RMS61083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                              2994 A 2994
                                                                                                                                                                                                                                                                                                                                                              1021 A 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     : ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OPIGIN
                                                                                                                                                                                                                                                         Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .<u>:</u>
```

14 AALITAGNAMA*TICTGAAATAAAAATATTAAAATTAAAATTAAAATTATAAATTATA
12 24 24 24 24 24 24 24

```
S. (bases | to | 1864).

Adachi, J., Alzawa, K., Akahira, S., Akimora, L., Aono, H., Arai, A.,
Arakawa, T., Baldarelli, R., Bono, H., Brownstein, M., Ball, C.,
Carrinci, P., Fukoda, S., Fakonishi, Y., Pirone, M., Harayaki, T.,
Hara, A., Hayaisu, N., Hill, D., Hiramoto, K., Hiracka, T., Hori, F.,
Hume, D., Hograni, K., Ishii, Y., Itoh, M., Isawa, M., Kasukawa, I.,
Kato, H., Kawai, J., Kojima, Y., Nomo, H., Nomita, K.,
Nurihara, C., Matsuyama, I., Myazaki, A., Nishi, K., Nomita, K.,
Numazaki, R., Ohno, W., Okazaki, Y., Okido, T., Owa, C., Quackenbush, J.,
Salio, H., Salio, P., Sakai, C., Shihata, Y., Shihata, Y., Shihata, Y., Shihata, A., Shihata, I.,
Soqabe, Y., Suzuki, H., Hagami, M., Ladawa, A., Lakhashi, F.,
Janaka, I., Tojima, Y., 109a, I., Yamamota, I.,
Yasunishi, A., Yoshida, K., Yoshino, M., Mutamatsu, M., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kawai, J., Shinadawa, A., Shibata, K., Yoshino, M., Itoh, M., Ishii, Y., Arakwa, I., Bara, A., Eukunishi, Y., Konno, H., Abachi, J., Eukuda, S., Alzawa, I., Izawa, M., Nishi, Y., Konno, H., Kondo, S., Yamanaka, I., Salto, T., Okazaki, Y., Gojoberi, T., Rono, H., Kashkawa, T., Salto, R., Kadofa, K., Matsuda, H., Ashburnor, M., Hatalov, S., Yasavant, T., Fleischmann, W., Gaasterland, J., Gissi, C., Kind, H., Korbiwa, H., Kuchi, P., Lewis, S., Matsuo, Y., Nikaido, I., Posole, G., Ouackenbush, J., Schimal, J. Gissi, C., Pottiki, R., Tomita, M., Wagner, L., Washio, T., Saki, K., Okido, T., Furino, M., Aono, H., Raldarelli, R., Barsh, G., Blake, J., Holtelli, D., Hojunda, N., Fletcher, C., Fujita, M., Gustincich, S., Hill, D., Hofmann, M., Hume, D.A., Kamiya, M., Lee, N. H., Lyons, P.,
                                                                                                                                                                                       ttoh, M., Konno, H., Okazaki, Y., Muramaisu, M., and Hayashizaki, Y., Normelization and subtraction of cap trapper selected connas to generate full-length cona libraries for rapid discovery of new genese Genome Res. 10 (10), 1617-1640 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Marchionni, L., Mashima, J., Mazzarelli, J., Mombaerts, P., Nordone, P., Ring, B., Ringwald, M., Rodriquez, L., Sakamoto, N., Sasaki, H., Sato, K., Schoubach, C., Seya, T., Shibata, Y., Storch, K.F., Suzuki, H., Toyo-oka, K., Wang, K.H., Weitz, C., Whittaker, C., Wilming, L., Wyushow Boris, K., Yoshida, K., Haseqawa, Y., Kawaji, H., Kohtsuki, S., and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Shibata,K., Itoh,M., Aizawa,K., Nahacka,S., Sasaki,N., Carninci,P., Konno,H., Akiyama,J., Nishi,K., Kitsunai,I., Tashiro,H., Itoh,M., Sumi,N., Ishi,Y., Nakamuras,S., Hacama,M., Nishine,T., Harada,A., Yamamanio,R., Marsamanio,R., Sakayarchi,S., Ikenami,T., Rashiwaqi,K., Fujiwake,S., Inoue,K., Toqawa,Y., Lawa,M., Ohara,E., Watahiki,M., Ohara,E., Y., Ishikawa,I., Ozawa,K., Tanaka,T., Matsunia,S., Kawai,J., Okazaki,Y., Maramatsa,M., Inoue,Y., Kira,A., and Hayashizaki,Y. RIKEN integrated sequence analysis (RISA) system. (84-format Genome Res. 10 (11), 1257-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Physical and Chemical Kesearch (RTKEN), Laboratory for Genome Exploration Research Group, RTKEN Genomic GSC). REKEN YOKOHAMA Institute; 1-7-22 Suchito clos, Isnium Rus Yokohama, Kanaqawa 230 0045, Japan (E-mail:qenome-residentiken.do.)p.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              salwaitted (10 TML 2000) Yeskihide Bayashiraki, The institute of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fax:81-45-503-9216)
Pigsen gistin our web site (*tip://ordemo.ps.ribet.or.)[,) for
                                                                                                                                                              Carninci, P., Shibata, Y., Bayatsu, N., Suqahara, Y., Shibata, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              URL:http://qenome.gsc.riken.go.jp/, Tel:81 45 504 9222,
Meth. Enzymol. 303, 19-44 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hayashizaki,Y.
                                                                               10349646
                                                                                                                                                                                                                                                                                                                                                                                               11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21085660
                                         99279253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11217851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PURMED
                                         MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
    JOURNAL.
                                                                               PUBMED
                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                             KEFEKENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                            JOHRNAL
                                                                                                                                                                                                                                                                                                                                                                                               PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LNAWWOO
```

```
YFIKESPFALLREFYKTAALPINGSPRTPPRGGNESAFIAÄGLENGTFITEVLFKEHE
CNIDEWKNYFKNETPPLINSGGIVSSNGLPEVPESLSKRYEEVYLKNKOLDARLFLDHD
KTLOTHOFIDSFETERTPPRNNPDFEANVVTPHTPVPTVMNTIGGLMVTLNSASHOPSE
NLISYFNNCTVNP
                                                                                                                                                                                                                                                                                                                                                                                  Zolone libe FRIKFN full length enriched mouse obuA library."
Zdev_stage="10 days embryo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          71 rais lat lon-"MERKAPRAAAAEPPPPPPPPPPPPPAQDSGPEELPLARLEFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ETERPETALOGKTAVPTHVRERAMITHWEKVSSVAGAARARTENGGICTFTAAV
DIDEMPPTFTELOKSTETSVYKFFDILIKETDISTKVDNAMSRILIKKYNVIÇALIVSKTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RTCELLYLTQPSSALSTEINSMLVLKISWITFELLAKGEVLQMEDDLVISFQLMLCVVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    70 ITAACITGGGAGAAAGFFFGATGGATGGAGGGFTTGGGAGGGFTATAFFGAAAAGAA 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  136 AAGGAANTGTGAAAAATOTGTATANNITBATTGAARATTGANOTAGAAATGTOGTTO 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            190 ACTITITACTGAGGTACAGAAAACATAGAAATCAGTGTCCATAAATTGTTTAACTTAGTA 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                478 ACITITACIGAGCIACAGAAAAGCAIAGAAAACCAGIGICIAIAAATICIIIGACITAITA 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                410 GATGIAITGITIGOACTCTICAGCAAATIGGAAAAGACAIGIGAAACTIAIAITAITGIACA 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10 GALELLACIOCALTATOTOAGAATTAAAGATA??AGATCATGTGAGAGAGAGAGGGTTTGG 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    250 AAAGAAA FIGAYACCAGTACCAAAGTIGATAATGCYATGTGAAGACHGIIGGAAAAAGYAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25.9%; Score 879.8; DB 11; Length 1364; 89.0%; Pred No. 1.8e-159;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Znote-"data source:MGD, source key:MGT:97874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches 117;
                                                                                                                                                                                                                                                                      /organism="Mus musculus"
/strain "CS78L/63"
TR aret "FANT M TP principMil"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            346 €
                                                                                                                                                                                                                                                                                                                                /db vrof-"MCD-MCI-1905260"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /protein_id-"BAB27493.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db xre1-"GI:12847244"
/db_xre1-"MGD:MGI:97874"
                                                                                                                                                                                                                                                                                                                                                  /db xrof-"taxon 10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        307 g
                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                    /clone-"2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /codon_start·
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          evidence: ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                              /qene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .>1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30€ €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                      . 1364
                                                                                                                                                                                                                                                                                                                                                                                                                            1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                    SOLK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ro
                                                                                                                                                                                                                    HOST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 950;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                          Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE CHUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                402
                                                                                                                                                                                                                                    FEALURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
```

```
BQ4.9521
AGENOOFFT_7766662 NIB_MNT_92 Home sapiens ePNA elege IMA3E:5015480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota, Metakou, Chordata, Craniata; Vertebrata, Euteleostomi;
Mammalia; Butheria; Primates, Catarrhini; Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             958 GTTCTCTGTAAAGAACACGAGTGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAAT 1817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1018 TITATEFETTITATAAATICACITEGGAATTGTATCATCATGAAGGGGGGGGTGAA 1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1078 AGTICTTTCTAAACGCTATICAAGAAGTTTTATCTTAAAAACAAAGATTTAGATGCAAGACTG 1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         970 ANGACESTIA EGAACACTA ECCAATIA ALGA EGA ETITAAA ITCAGA STATCAA 1829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1258 AGGACTGTTATCAATACTATTCAACAATTAATGCTGATTTTAAATTTCTGCAAGTGATGAG 1317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA Library Preparation. Life Technologies, Inc. CNA Library Arrayed by: The I.M.A.E. Consortium (LLNL) DNA Sequencing by: Apercourt Bioscience Corporation Clone distribution Aper MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HILLE HILL THE THE THE THE HILLE HILLE HILLE HILLE HILLE HILLE BAT CONTROLLE CALLE CONTROLLE CON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                898 OCHPAGAAPAGAGGGFFGGGTAGCAAANAAGTAGAAAATAGATAGAGATTATGGGG 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               730 TTTATACCTTTTATGAALTCTCCTTGGACTTGTAACAFCTAATGGACTTGCAGAGGT1GAA 789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     790 AATCTITCIAAACGATACGAAGAAATITAICIIAAAAAIAAAGATCTAGAIGCAAGAIIA 849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 850 TITITGGATCATGATAAAACTCTTCAGACTGATTGTATAGAGAGTIITGAAACAGAAAA 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              910 ACACCACAAAAAAGTAACCTTGATGAAGAGGTGAATGTAATTTCCTCCACACACCAGTT 969
376 PAAPPPAGGAPPTGGATATGTAGTGAAATAAATTGTGGATTGGTGCTAAAAGTTTG1123 129
                                                                                                     658 CAACICAGIANINGCITATCTAGTGAAATAAATTCTATGTTGGTGCTAAAAATTTCTTGG 717
                                                                                                                                                                                                                            490 TITCASITAAIGCIAIGIGCGITGACIAITTAAITAAACTGTCACGIGCGAIGFIGCIC 549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    550 AAAGAACCATATAAAACAGCTGTTATACCCATTAATGGTTCACCTCGAACACCCCAGGGG 609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIH-MSC http://mgc.nci.nih.gov/.
National Institutes of Bealth, Mammalian Gene Collection (MSC)
                                                                                                                                                                                                                                                                                 KAN GITETETETAANAANAAATAIGAATGIAAIAINGAISAAAAAAAAAAAAA
                                                           1030 CCTICAGAAAAICTGATTTCCTATTITAACAACTGCACAGTGAATCC 1076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Robert Strausborg, ph D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HQ439221.1 G1:21178297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases | to 1081)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5′, mRNA sequence.
HQ439221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BQ439221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMEND
                                                                                                                                                                                                                      λ
3
                                                                                                           £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  d
d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         òλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŌΣ
```

```
/note "organ: testis: Vector: pCMV SpokT6; Site_1: Not1; Site_2: Sall; Cloned unidirectionally: Oliqo-dT primed. Average insert. Size 2.5 kb. Library enriched for full length clones and constructed by tite Tochnologies. Note: this is a NHE_MOC_Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2494 GAAGGAGAAGTAAAGTAAAGATCTCCCAGGAGTTCCAAATTTCAGCAGAAATTGGGCAGAAAA 2553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2554 ATGACTICTACTGGAAGACGAAAAGGAAAAAGGAAAATGAATGATAGGTTGGATAGCTGA 2613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2614 AACAAGGAAGAAAAAAAATGAGGAATCTCAGGACCTTGGTGGACACTCTGTACGTCTGGATT 2673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2674 CATTGTCTCTCACAGATGTGACTGTATAACTTTCCCAGGTTCTGTTATGGCCACATTA 2733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2854 TGCCATTAAAAAGTTGTAGCAGATTGTTTCCTCCTTCCAAAGTAAAATTGCTGTGTTTA 2913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2914 TOGATAGTAGGAATGGGCCTAGAGTGGCAGTGCTGATAAGCCAGGGTGTGTGAGTAGTT 2973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2974 TOPETTETTETAGATATAGGTGATGTTTGCTGTTTTTTTATAATTTATATGTATA 3033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8884 TTTTTTAATTTAACATGAACATGAACATTAGAAATGTGTGCGTATCTACTACTAAATGCAA 3883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8094 HIIGALIGACTGCCCALICACGAAATIAIGCTGAAGTTCTTGCAAAAATGGATATIAF 3153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3154 TAGAAATTAGAAAAAAATTACTAATTTTACAATTAGATTTTATTTTATTTTACTATTGGAATCT 3213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241 AIAICTEGAGCICTTTTGEGGAAIATAAAATGTGCAAATGAAATTGTTGGGGTGATTGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             401 AAGCCACHIGAAALGFFAGLCAFFGFFALTFIAFACAAGAFFGAAAAFCFFGFGAAAFFCF 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    461 TGCCATTIAAAAAGTIGIAGCAGAIIGIIICCICIICCAAAGIAAAAIIGCIGIGCIIIA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.21 FIGATAGTAAGAATGGCCCTAGAGTGGGAGTCCTGATAACCCAGGCCTGTCTGACTT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GAAGCAGATGAAGTAAACATCTCCCAGGAGAGTCCAAATTTCAGCAGAAACTGGGCAGAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2734 AFALCH CAGUCH HI FORMATA FAAAA FI GCAGA FI GCAAT FI FI FI FI GGGGAAT FICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone lib "NiH MCC_92"
/tissue type:"embryonal carcinoma, cell line"
/lab_host "liHloB (phage:resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                               25.2%: Score 856; DB 14; Length 1081;
99.1%: Pred. No. 6.96-155;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 - E - E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Plate: LLAM14211 row: k column: 01
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                        /organism-"Homo sapiens"
                                         Migh quality sequence stop: 732. Location/Qualitiers
                                                                                                                                                    /clone-"IMAGE: 6015480"
                                                                                                                          ": axon: 9606"
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 892; Conservative
                                                                                                                                 'db' xret
                                                                                     1081
                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                     117 0
                                                                                                                                                                                                                                                                                                                                                                                                                      Othersy Materia
                                                                                        Sollos
                                                                                                                                                                                                                                                                                                                                                     HASSE THINE
                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                            NI SIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \tilde{\xi}_{n}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ē
```

```
DQ220275 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY 2002 ANY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Anotes "Organ: restiss Vector: pCMV-SP-MR16: Site_1: Not1: Site_2: Sall; Cloned unidirectionally; OliquedT primed. Average insert size 2.5 % Library emiched for full-length clones and constructed by Life Technolouses. Note: this is a NIH_MCC library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metaroa; Chordata; Chariata; Vertebrata; Euteleostomu;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                     3334 GAACTTACTGATTATTTCTTCATCCAACHATGHTHAAALGA GGAHALGATAGT (1927 | 1937 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947 | 1947
                                                                                                                                      3274 AGTATAACCATATGATACTATCATACTIACTGAAACAGATTCATACTTCAGAATGTAAAA 3333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             644 TAGAAAATGATAGAAGAATFATTGAAGTTGTGTGTAAAGAAGATGAATGTATATATGTG 703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             National Institutes of Bealth, Mammailan Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGT clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    464 AAATGGAAGATGATGTGATTTGATTTGAGTTAATGCTATGTGTGTTGTTGATTTTA 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   524 TTAAAACTCTCACTCCCATGTTGCTCAAAGAACCATATAAAAACAGCTGTTATACCCATTA 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                584 ATGGTTCACCTCGAACACCCAGGCGAGGTCAGAACAGGAGTGCACGGATAGCAAAAAACAA 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 ATGGTTCACCTCGAACACCCAGGCGAGGTCAGAACAGGAGTGCAGGATAGCAAAAAAAC 180
720 GATATACTGIGIGCTIGITTIAIAAATTTIGCTTTI ATTAAATAAAAGCTGGAAGCAA 778
                                                                                                                                                                                                             61 TTAAACTCTCACCTCCCATGTTGCTCAAAGAACCATAFAAAACAGCTGTTAFACACATTA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 AAATGGAAGATGATGTGGTGATTTGATTTGAGTTAATGGTATGTGTGGCTTGACTATTTA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            zdeb :z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA Library Preparation: Lite Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLML)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24.9%; Score 844.8; DB 14; Londth 8H1; 99.0%; Pred. No. 1e-152; tilve 0; Mismatches 7; Indels 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /cloue-"IMAGE:6044522"
/clone-lib-"NIH_MGG-22
/issuc_type="embryonal carcinoma, cell line"
/lab_host-"DH108 (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       found through the L.M.A.G.E. Consortium/LLNE at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             row: e column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7.64 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .881
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
Contact: Robert Strausborg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 881)
NIH-MGC http://mgc nci nih gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High quality sequence stop: 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: cgapbs remail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Onalitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          155 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BQ220275.1 GI:20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       http://image.llnl.gov
Plate: LLAM13287 row:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        149 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5', mkNA sequence.
HQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        313 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 871;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESS 10N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ROCES
                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                          ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
```

â

```
HM475603
ACENTRARIE 6480807 NIH_MSC_92 Home sapiens contained IMAGE 5575683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
Enkaryota: Merazoa: Chordata: Craniata; Vertebrata: Enteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                        944 ATGTAALTGGTCCACACACACTGCANTTAGGACTGAACTATCCAACAATTAATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1004 IGAITITAAATICAGGAAAGTGATGAAGGTGAAGAAAATGTGATTIGGTATTTAAGAAGT 1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1954 GCACAG FGAATGCAAAAGAAGTATACTGAAAAGAGTFGAAGGATATAGATGATGTTTTA 1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1124 AAGAGAAATTTOOTBAAGOTGTGTGGAAAGGGGTTGTGGAAATTGGATAGAGGGGATAGA 1183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      754 CATCTAATGGACTTCCAGAGGTTGAAAATCTTTCTAAACGATAGGAAGAATTTATCTTA 823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      244 GATTATCCATTCAAAATTTTAGCAAACTTCTGAATGACAACA-TTTTTCATATGT-CTTT 1301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDNA Library Preparation: Life Technologies, inc. CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLML) DNA Sequenting by: Agencourt Bioscience Corporation Cloud distribution: MC clone distribution information can be tound through the L.M.A.G.E. Consortlum/LLML at.
                                                                                                                                                                                                                                                                                                                                                                                                                                   481 ATGTAATTOCTOGAGAGAGAGTTAGGAGTGTTATGAACAGTATGCAACAATTAATGA 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7-04 AGGLGAAAAATGTITAFTITCAAAAATTTFATACCTTTTTATGAATTCTCTTGGACTTGTAA 763
                                               241 AGGIGAAAATETTATTTCAAAAATITTAIACCITTAAGAATTCICTIGGACTTGTAA 300
                                                                                                                                                                                                                    884 CIATAGACAGTTTTGAAACACAGAGAAAAGCACACAAAAAAGTTTGATGAAGGTGA 943
                                                                                                                                                                                                                                                                                                                                        4.21 CIAIAGACATTITGAAACACAGAGAACACACAAAAAAGTAACTIGAIGAAGAGGIGA 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661 AAGAGAAATTTGCTAAAGCTGTGGGACAGGGTTGTGTCGGAAATTGGATCACAGGGATACA 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        721 AACTIGGAGTTFGGTTGTATIAOPGAGTAATGGAATOFATGGTTAAATGGAAAGAGAGAGAGAGA
                                                                                                                                                                                             824 AAAAIAAASAICIAGAIGCAAGAIIAIIIIIGGAICAIGAIAAAACIGIICASACIGAII 883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NIH-M:C http://mgc.mrl.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                         Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
                         1 602 ATTGGGGTGCGCTTGAGGTTGTAATGGCCACATATAGC 1341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plate: LLAM12326 row: f column: 04
High quality sequence start: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: cqapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tissue Procurement: AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BM475603.1 GI:18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          http://image.llml.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mFNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       нишап.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEPT BY LITTLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ROAN I SM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESCLI 6
BM4756.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWCKLOS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSI 'N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7(1,35)
                                                                                                  Š
                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                     â
                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                     ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
```

```
/clone_lib="NHH_MGC_92"
//tissue_type="cmtryonal carcinoma, cell line"
//tissue_type="cmtryonal carcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
/note="Ordan testis, Vector pCMV-SPORT6: Site_1: Not1;
Site_2: Sall: cloned unidirectionally; oliqued primed.
Average insert size_2: & kt. Library carriched for
full length clones and constructed by Life Technologies.
Note: this is a NHH_MGC_Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            971 GGACLGITATGAACACIAICCAACAAITAAIGAIGAITITAAAITCAGGAAGIGAICAAA 1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       371 AACCCAGCAGTTTCGATATCTAGTCAATAAATTCTGGATTGGTGCTAAAAGTTTCTTGGA 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  491 PPCAGPFAAFIGGFAGGFGCGFTGACFFTFTFAFFAAACFGCFCCCCAFGFFGCFCA 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             551 AAGAACCATATAAAACAGCIGTTALACCCATTAATGGTTCACCTGGAACAGGGGGGG 610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           252 AGANATIGATACCAGIACCAAAGIIGAIAGIAIGIAAGACIGIIGAAGAAGAAIAIAIGA 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         312 TCTATTCTTTCCACTCTTCACCAAATT GGAAAGGACATGTGAACTTATATTATTGACAC 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCACATITITATEAGGIAAAGGGGAAGIA1IACAAAIGGAAGAIGAIGIGGIGA111CAI 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             611 GTCAGAACAGGAGTGCACGGATAGAAAAAAAATAGAAAATGATACAAGAATTATTGAAG 670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    671 TECHNICIAAARAARAIGIAA IGIAA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         911 CACCACGAAAAGTAACCTTGATGAAGGIGAAIGTAAITGCICCACACACACICAGIIA 970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               403 CTFACAACAAGTGCATGCATAGCAAAACAACTAGAAAATGATACAACAATTATTCAAC 452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               731 TTATACCTTTTATGAATTCTTTGGACTTGTAAGAICIAAIGGACITCCAGAGGIIGAAA 790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               791 ATCTTTCTAAACGATACGAAGAAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTAT 850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         583 ATCTTTCTAAACGATACGAAGAAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTAL 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 851 TITIGGATGATGATAAAAGTGTTGAGAGTGATTGTATAGACAGTFTTGAAACAGAGAGAA 910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  463 TICICIGIAAAGAACAIGAATGIAATAIAGAISAGGISAAAAAIGIIIAIIICAAAAATI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 13; Length 1001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 786; DB 13;
Pred. No. 2.1e-141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     288 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                             /organism-"Homo sapiens"
                                                                                                                                                                      /db_xref-"taxon:9606"
/clone-"1MAGE:5575683"
High quality sequence stop: 734.
                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     186 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23.28,
95.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     178 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               833; Conservative
                                                                                       .1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          349 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hest Local
                                                                                       Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>0</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ζ
```

```
1.000
                                                                                                                                                                                                 90
                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ਰੋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ch
C
                                                                                                                                                                                                                                               ā
                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                          ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \Gamma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Anote "Ordan: ovary (pool of 3); Vector: pCMV-SPORI6; Site 1: EcokV (destroyed); Site 2: Not1; KNA source pool of three ovaries, from females ranging in age from 38 to 49 yo. Library is oliqo-dT primed and directionally cloned (EcokV site is destroyed upon cloning). Average insert size z.1 kb, insert size range 1-3.5 kb, Library is constructed by G. Grubor (Invitrogen), Research Genetics enastructed by G. Grubor (Invitrogen), Research Genetics tracking code 036.
                                                                                                                                                                                                                                        BM54588B1 1122 bp mENA linear EST 20 FEB 2092
AJENCOURT_65051B4 NIH_MGC_125 Homo sapiens cDNA clone IMAGE:5588245
                                                                                                                                                                                                                                                                                                                                                                                                                     Bukaryola; Metazou, Chordatu, Craniata, Verfebrata; Euteleostomi;
Mammalla; Eutheriu: Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24.19 CTCAAAAGAAGTGCTGAAGGAAGCAGCCTCCTAAACCACTGAAAAAACTACGCTTTGAT 2478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2479 ATTGAAGGALGAGATGAAGGAGGAGGAAGTAAAGTFFCCCAGGAGAGTGCAAATTTCAG 2538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          chan library Proparation: Life Technologies, Inc., that Library Arrayed ky: The L.M.A.G.E. Consortium (LLNL) DAN Sequencing by: Apparount Hisosience Corporation Choice distribution: MGC close distribution in MGC close distribution intermation can be found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300 CTCAAAAGAAGTGCTGAAGGAAGCAACCCTCCTAAAACTGAAAAAAACTACGCTTTGAT 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360 ATTGAAGGATGAAGGAAGGTGGAAGTAAAAGATGCGAGGAGAGGTGGAAATTTGAG 419
                       1 (bases 1 to 1122)
NIH-MOC http://mqc.nci.nih.qov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            / Match 22.28; Score 752.4; 508.13; Ecuath 1122; Local Similarity 95.68; Pred. No. 6.3e-135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         stoput
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ....
                                                                                  1089 ACTGAAAAGAGTGAAGGATATAGATATAA 1124
                                                                                                                              BB + TATACCCGGAAAAGAAGCCTAAGCAATATAGGAATAA 918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plate: LLAM12359 row: a column: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone_lib-"NIH_MGC_125"
/lab_host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
Contact: Robert Stransberg, Ph.b.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        High quality sequence start: 48
High quality sequence stop: 773.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone-"IMAGE:5588245"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lissue Produrement: Invitrogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_vrof-"tavon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: eqapbs ramail.nih.qov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         216 9
                                                                                                                                                                                                                                                                                                                              BM545881.1 G1:18778365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bitp://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         185 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 827; Conservative
                                                                                                                                                                                                                                                                                    , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         46.0 d
                                                                                                                                                                                                                                                                                                    BM545881
                                                                                                                                                                                                                                                                                                                                                                              human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Owery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sontos
                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                REINVISH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RASE COUNT
                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEFEKENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JUSTRANDI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                             RESULT 7
                                                                                                                                                                                                                      HMC4'REL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . MMENT
                                                                                                                                                                                                                                                                                                                                                                         3.305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NICINO
                                         =
                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ĩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
```

```
EST 14 - AUG 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST (Poustka, A., Welleureuther, K., Mewes, H.W., Well, B. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Poustka, A., Wellenreuther, R., Mewes, H.W., Weil, B. and Wiemann, S.).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Eukaryota, Metazoa, Cherarebini, Baminidae, Bomo,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2599 ACCATGGATACCTCAAACAAGGAAGAGAAATGAGGATCTCAGGACTTGGTGGATACTGT 2658
                                                                                                                                                                    2659 GIAMACCICTGGATICALIGICICICACAGAIGIGAACIAIAACHHCCCAGGTTCTGT 2718
                                                                                                                                                                                                                                                                     2719 TTATGGCCACATTTAATATCTTCAGCTCTTTTTGFGGATATAAAATG1 GCAGATGCAATT 2778
                                                                                                                                                                                                                                                                                                                                                                    2779 GTTTGGGTGALLCCLAAGGCACLIGAAALGTLAGTGALLGLALIALALAGAAGALLGAAA 2838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2839 AIGTIGIGIAAAIGGIGGGAIIIAAAAAGIIGIAGGAATIGITITOOTOTTOTAAAAAAA 2898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2899 AATTGCTGTGCTTTATGGATAGTAAGAATGGCCCTTAGAGTGGGAGTCCTGATAACCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3076 TCTATCTTCCAAATGCAATTTGATTGACTGCCCATTCACCAAAATTA1CCTGAACTCTTC 4135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3019 TAATITATA--TGTATATTITITTTAATITAACAIGAA CACCCITAGAAAATGTGTCCIA +075
                                                                                                                                                                                                                                                                                                 780 AAITGCIGTGCTITAIGGATAGIAAGAAGGCCCTAGAGGGGAGTCCTGAIAACCCAGG 839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540 GTACACCTCTGGATTCALFCTCTCACACATGTGACTGTATAACTTTACCAGGTATGT 599
                       480 AGCATGGATACCTCAAACAAGGAAGAAAATGAGGATCTCAGGACTTTGGTGACACTGT 549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DAEAD41300816_rl 413 (synonym: hice2) Homo Sapiens cDNA clone
DKEYp31300816 5', mkNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            959 ICIATCIICCAAAIGGAA111GA11GAC1GCCAIICAC: AAA11A1CTGAACTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Department Lebrach
Max-Planck Institute for Molecular Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This is the 5' sequence of the clone insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: poustka@mpimq-berlin-dahlem.mpq.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     THENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The Strasse 73, 14195 Berlin, Germany Tel: (49-30-84131623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           727 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3195 TATITIACIALIGGAAICIGAIAIA 3219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1078 TATTTTACTALTGAAAAACGAALA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AL597811.1 GI:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Poustka A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fax: +49-30-84131128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A1.597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 8
AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             THEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
```

```
0
Cloue from S. Wiemann, Molecular Genome Analysis, German Cancer Research Center (DKFY), Phail s.Wiemannakfr heidelberg.de; sequenced by DKFZ (German Cancer Research Center, Heidelberg/Germany) within the cDNA sequencing consortium of the German Genome Project.
                                                                                                                                                                                                                                                                                                                                                             This clone (DKFZp31300016) is available at the KZPD in Berlin.
Please contact the PZPD: Possentroprentium, Heubnerweg 6, 14059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2270 GAAATCTACTTTCTCTTTCACTCTTTTAIAAAAAGTGTAICHCGGGTTAAAAATCTAICTCCGGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2076 IIIGAICAAAGAAGAGGAGTATGATTCIATTATAGTATICTATAAACTCGGTCTFOAFGAA 2129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21.40 GAGACTGAAAAAAAATATTTGCAGTATGCTTGGAGGAGGGGGGGTAGGTGGTGAGGAAT 2189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIMB ACCITACATICCTCCAAGCCCTTACAAGTTTCCTACTTCACCCTTACGGATTCCTGGAGG 2249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2.259 GAACATCTATATTTCACCCCTGAAGAGTCCAIAIAAAA111CAGAAGGTCTGGCAACAC 2.309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2410 AACAAAAATGACTCCAAGATCAAGAATCTTAGTATCAATGGTGAATCATTCGGGACTTC 2369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2430 TOTICANGIANG AND ACCOUNTABANCE AND ACTIONAL TRICKLAND TET GALACTED 2489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (a) CIIGALSAAAGAAGAGGAGIAIGATICIATTATAGTATTCIATAACTGGGTCTTCATGCA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421 ACCICACAITCCCCCGAAGCCTTACAAGTTTCCTAGTTCACCCTTACGATTCTGGAGG 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241 AATCATTGTAACAGOAFACAAGGAFGFECFCFCFCFCFCAGGAGAGGAFCGAAGGFGF 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481 GAACATCIAFATTTCACCCCTGAAGAGTCCATATAAAATTTCAGAAGGFCTGCCAACACC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          941 AACAAAAATGACTOCAAGATCAAGAATCTTAGTATCAALGGAGGGATCATCGGGACTTC 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GAMATCTACCTCTTTCACTGTTTTATAMAAAAAGTGTATCGGGTAGCCTATCTCCGGGCT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21.4%; Score 725.4, DB 9, Length 727, 99.9%; Pred. No. 1e-129; tive 0; Mismatches 1; Indels 0
                                                                                                                                                                     Berlin-Charlottenburg GEPMANY: Email: clope@czpd de
                                                                                                                                                                                                                                                                                              /clone_lib-"il3 (synonym: hlcc2)"
/dev stage-"adult"
/lab_host-"pHlop"
                                                                                                                                                                                                                                                                                                                                                                                                         130 4 1981
                                                                                                                                                                                                                                  Zorganism-"Homo sapions"
Zdb xrof-"taxon 9606"
Zolono-"DKFZp31300816"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                           sequence available.
                                                                                                                                                                                                                                                                                                                                                                                                         .. [']
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 726;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OHERY Match
                                                                                                                                                                                                                  40J1
                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                NICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               £.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             â
```

```
BQDDDDD77
AGENCOURT_7566045 NIH_MGC_92 Home sapiens cDNA clone IMAGE:6041563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /tissue_type="embrydeal carcinoma, cell line"
/lab.host."DHIDB (phage resistant)"
/note_"Organ: testis; Vector: pCMV-SPOR16; Site_1: Not1:
Site_2: Sal; Clenca unidirectionally; Oligo-dl primed.
Average insert size 2.5 Kb. Library enriched for
tull-length clones and constructed by Life Technologies.
Note: this is a NH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                 Eukarycia, Metazda, Chordata, Cranjata, Veitebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 880)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA Library Preparation: Life Technologies, Inc. (CDNA Library Preparation: Life Technologies, Inc. (CDNA Library Arrayed by. The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Approprix Bloscience Corporation Clone distribution: Mar clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                      K.m MSC http://mgr/nci.sih.job/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                373 CCCAGCAGITCGATALCIACTGAAAIAAAIICIGCAIIGGAGGAAAAAAGIIICIIGGAIC 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 ACATITITATIAGCIAAAGGGGAAGIAIIACAAAIGGAAGAIGAICIGGIGAITITCAIII 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241 GAACCATATAAAACAGCTGTTATACCCATTAATGGTTCACCTCGAACACCCAGGCGAGGT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  313 GTATTGTTTGCACTCTTCAGCAAATTGGAAAGGACATGTGAACTTATATATTGGACAA 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              433 ACATTTTATTAGCTAAAGGGGAACTATTAGAAATGGAAGATGTGGTGALFLGALLE 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              493 CAGTTAATGCTATGTGTGTGTGTTATTTATTAAAGTGTGAGGTGGGGGGATGTTGGTGAA 552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            553 GAACCATATAAAACAGFTGTTATAFQCATTAATGGTTGACCTGGAACAGGGGGGGGGT 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 14; Length 880;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21.2%; Score 720.6; DB 14 98.7%; Pred. No. 8.6e-129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      http://image.llnl.gov
Plate: LLAM13279 row: i column: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact, Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "close_lib-"NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            High quality sequence stop: 606.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone-"IMAGE:6041563"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Imail, cyapbs r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                   HQ222227.1 G1:20403627
                                                                                                                                                                                                                   , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .880
                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
2490 ACATGAA 2496
                                                721 AGAIGAA 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 든
                                                                                                                                                                                                                                                                                                                      human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    737;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Owery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHERE
                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                       RESULT 9
                                                                                                                                              встатал
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                     VET SAMV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
```

```
HG610661 BST 18-APK-2001
602611848E1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:4737634 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note-"organ: prostate; Vector: pinkELIR (Clontech);
Site 1: Siil (agregeringer): Site 2: Siil (agreatialager);
Double stranded cONA was prepared from cell line RNA.
5' and 4' adaptors were used in cloning as follows: 5' -CANSGCTATTATGGCT-4' and 3' adaptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sukaryota; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     973 ACLOTTALGAACACTALGCAACAATTAATGALGATTTTAAATTCAGCAAGTGATCAA-GC 1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lissue Producement: DCID/DTP clNA Library Preparation: CLONETCH Laboratories, Inc. clNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) NA Sequencing by: Incyte Genomics, Inc. clone distribution information can be clone distribution information can be
                        673 CTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATTTT 732
                                                                                                                 7.3.4 ATACOTITITATGAATICICITIGGACTIGIAACATCIAATGGACTTCCAGGGTTGAAAAT 792
                                                                                                                                                                                                                              421 ATM STITTIALGAATTSTSTSTSGASTISTAAPATGAGGGGGGGGGAGAGGTTGAAAAT 480
                                                                                                                                                                                                                                                                            793 CTITCTAAACGATACGAAGAAATITATCITAAAATAAAGATCTAGATGGAAGATTAITT 852
                                                                                                                                                                                                                                                                                                                        481 CITTCTAAAGGATAGGAAGAAATTTATCTTAAAAATAAAAGATCTAGATGGAAGATTATTT 540
                                                                                                                                                                                                                                                                                                                                                                    854 TTGGATCATGATAAAACTGTTGAGACTGATTGTATAGAGAGTTTTGAAAGAGAGAACA 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                             913 COASGAAAAAGTAACCTTGATGAAGGTGAATGTAATTCCTCCACACTCGACTTAGG 972
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mammalia: Eutheria: Primates: Catarrhini; Heminidae; Homo.
1. (bases 1-10-823)
NIH MGC http://web-nci.nib.com/
                                                                                                                                                                                                                                                                                                  found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "DH108 (11 phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="adenocareinoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   http://image.llnl.gov
Flate: UKM1605 row: o column: 11
High quality sequence stop: 709.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /orqanism."Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="IMAGE.4737634"
/clone_lib="NIH_MGC.60"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1032 TTCAGAAAATCTGATTTCCTATTTAA 1058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db xrel="!axon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         721 HEAAAAAARGIGAHHEGIAHHA 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: eqapbs remail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BG610661.1 GI:13662032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /lab_host
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MKNA Sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo saprens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13610661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROMISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No. ESS. LON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEFEKEN'E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J. JURNAJ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1835 10561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEALURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         111.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ... WMEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50.05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ē
                                           Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \hat{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                  4
                                                                                                                                                                                                                          Ξ
                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                              Ξ
                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                   =
                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
```

```
2520 AGGAGAGTCCAAATTTCAGCAGAAACTGGGAAAAATGACTTCTACTCGAACACGAATGCA 2579
                                                                                                                                                                                                                                                                     2880 GITICCICITCCAAAGIAAAAIIGCIGIGCIIITAIGGAIAGIAAGAAIGGCACTAGAGIG 2949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2940 GGAGTCCTCATAAGCCACCCTGTCTCATTHOTOTTTTTTTTTTTAATATATATAA 2999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9060 TAGAAAATGTGTGCTATCTTCCAAATGCAATTGATTGACTGCCATTCACAAAA 3119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3120 TTATCCTGAACTCTTCTGCAAAAATGGATATTATTATTATAAAAATT - AGAAAAAAATTATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2700 TAACTTTCCCAGGTTCTGTTTATGGCCACATTTAATATCTTCAGGTCTTTTTTGTGGATAL 2759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 AAAGGGAAAATGAATGATAGCATGGATACCTGAAACAAGGAAGAAAAASSAAGATSA 120
                                                                                                                                                                                                                                                                                                                                             421 GGAGICCIGAIAACCCAGGCCIGICIGACITIGGCCITCIIIIGIAGCAIAIAAATAA 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541 IAGAAAAIGEGEGIAIGIAIGIAIGIAAAAAAAAAAIIIGAIIIGAGGGGAAIIGAAAAA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    718 IAAAA111GC111AAC1AACAIACAAGC1GGAAGGAAAGGTAT ACCATATGATACTATCA 776
                                                                                                                                                                               sdep 16
                                                                                                                                                                                                                                       1 AGGAGAGTCCAAATTTCAGCAGAAACTGGCAGAAATGACTTCTACTCGAACAGAAATGCA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2760 AAAATGTGCAGATGCAATTGTTTGGGTGATTFCTAAGGCAGTTGAAATGTFAGTCATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2820 TATTTATACAAGATTGAAAATCTTGTGTAAATCCTGCCATTTAAAAAGTTGTAGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                        181 TAACTTTCCCAGGTTCTGTTTATGGCCACATTTAATATCTTCAGCTCTTTTGTGGAATAF
                                                                                                                                                   DB 12; Length 824;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inde ls
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3297 TACHACTGAAACAGAITIGALAGGICAGAAIGIAAAAGAACH 3338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 699,6; DB-12
Pred, No. 9,6e-125;
                                                                                                                                                                               0; Mismatches
                                                                                                                                                 20.6%;
94.8%;
                                                                                                                                                                              Matches 779; Conservative
                                                                                                                                                               Best Local Similarity
                                                                                                                                                 Query Match
                                                                                                   HASE COUNT
                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . oy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qa
:
                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ó
                                                                                                                                                                                                                                                                                                                               ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ô
```

RESULT 11 AL56375770

```
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                       mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       233 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BG570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINIT: ON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BG570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOCOS
                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zhorth "Organ: brain, Vector: pCMVSDORT 5: 1st strand cDNA was primed with a Nort-oil go(df) primer by Prime ond enriched, double stranded cDNA was digested with Not I and cloned into the Not I and Eco RV sites of the pCMVSDORT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 vector. Library was normalized. Library was constructed by tife technologies. Contact: Feng Library was constructed by tife technologies. Contact: Feng Library was constructed by the technologies, a division of Invitrogen 9800 Medical Center Drive Bearling Maryland 2085, USA bay: (1) 391 6.0 8371 Email: Illangellitetech.com URL: http://fulllength.invitrogen.com"
                                                                                                                                                                        Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Eufeleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 792)
                      AL564757 LTI_NFL001_NB04 Homo sapiens cENA clone 080E0007YA05 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   981 GAACACTATCCAACAATTAATGATGATTTTAAAGTTCAGTGATCAACCTTCACAAAAA 1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               672 AGAACAIGAAIGIVAIAIAGWIGAGGIGAAAAAIGIIIWITICAAAAAITITATACCITT 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    681 AGAADATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATTTTTATATATTTTTATATACTTTT 740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         74) TATGAATTOTOTOGGACTIGTAACALGTAATGGACTTCCAGAGGTTGAAAATCTTTCTAA 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                432 AAGTAAGCTTGWTGGAGAGGTGAATGTAATTGCTGGAGACACACAGTTAGGAYTGTTTT 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                792 FAAAACAGCHKITA LACCCATTAAHGGTFCACCTCGAACAGCCAGGCGAGGTCAGAACAG 733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 621 GAGTGGACGGATAGGAAAAAAAATAGAAAATGATAGAAAATATATAGAAGTTGTAA 680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7-32 GAGTIGGAGGGWTAGGAACAAY FAGAAAFFGATAGAAGAATTATTIGAAGTFFGFIGHAA - 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80) AGGATA/GAAGAAATTTATGTTAAAAATAAAAGATGTAGATGCAAGAITATTTTGGATGA 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapo
                                                                                                                                                                                                                                                                                                                                         HP 191 91006 EVRY codex - Prance
Email: segret@genoscope.cns.fr, Web : www.genoscope.cns.fr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20.6%; Score 698.2; DB 9; Length 792; 93.6%; Pred. No. 1.8e-124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indela
                                                                                                                                                                                                                                                        Full-length cDNA libraries and normalization Unpublished (2001)
                                                                                                                                                                                                                                       Tessee, I and Polayes, D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="neuroblastoma_cells"
                                                                                                                                                                                                                                                                                                                          Genoscope · Centre National de Sequencage
      mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="CSODDO07yA05"
/clone_lib="LTI_NFL001_NBC4"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                            /organism-"Homo sapiens"
/db_xrof-"taxon:9606"
  792 bp
                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "DHIOH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      e ci
                                                                                     AL563757.1 G1:12913464
                                          prime, mRNA sequence.
AL563757
                                                                                                                                                                                                                                                                                                     Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Caserative
                                                                                                                                                                                                                                         Grupper, C
                                                                                                                                                                                                                                                                                                                                                                                                          7.92
                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
es 722: Conserv
AL563757
                                                                                                                                                                                                                                         ۳.
ع
                                                                                                                                  human.
                                                                                                           ト
ケ
日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                   SOLITOR
                      CEFINITION
                                                                                                                                                    ROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RASE CONT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                        TITLE
                                                                 ACCESSION
                                                                                                           KEYWORDS
SIMBORE
                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                  REFERENCE.
                                                                                                                                                                                                                                                                                                                                                                                           FFATHRES
                                                                                       VERSEN
                                                                                                                                                                                                                                                                                                     N.IWW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u> 5</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ÷,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  :
::
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      â
```

```
BG570456 76 TO THE MCC_77 Home sapiens CONA Clone IMAGE:4717874 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fokangalas Matazas, Chasdatas Craniatas Ventebratas intelecastemis
Mammalias Butherias Primatess Catarrhinis Hominidaes Homo.
                                                                            1041 TCTGATTTCCTATTTTAACAACTGCACAGTGAA1CCAAAAGAAGTATACTGAAAAGAG. 1100
                                                                                                                                                                                                                                                                           1161 CGAAATTGGATCACACATACAAAGTISS AGITGSCITGTATTACCGAGTAATGGAA 1218
                                                                                                                                                                                                                                                                                                                                                                                1219 TCCATGCTTAAATCAGAAGAAGAACGATTATCCATTCAAAATTTTAGCAAACTTTCAAT 1278
                                                                                                                                                                                                                              192 CGAAATTGGATCACAGGATACAAGTIGGITGITIGGCITGTATTACCGAGTAATGGAA 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Manual to 767)

NIH-MGC http://mgc.nci.nlh.gov/.
National institutes of Heaith, Manualian Gene Collection (MW1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA Library Preparation: CLONTECH Laboratories, Inc. CNA Library Arrayed by: The L.M.A.C.E. Consortium (LLNL) DNA Sequenting by: Interpte Gonomics, Inc. Clone distribution: MC clone distribution information can be found through the LM A G E consortium/LLNL at:
132 ICCAIGCITIAITCAGAAGAAGGACGAITAICCAITCAAAAITIIBGCACACIICIGAAI 73
                                                                                                                            312 TYTGTTTTCYTWTTTTTACGACTGAAGTGAAATCCAAAAGAAAGTATACTGAAAAGGT
                                                                                                                                                                            1101 GAAGGATATAGGATACATCTTTAAAGAGAAAITTGGTAAAGCTGTGGGGACAGGGTTGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 692.2; DB 12; Length 767; Pred. No. 2.6e 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1279 GACAA-CATITITOATAIGICIITAIIGGGGIGGGGCICIIGAGGIIGIAAI 1328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D.
Email: cgapbs.r@mail.nih.gov
Tissue Frocutement. CLANTECH Laboratories, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plate: LLCM1568 row: h column: 03
High quality sequence stop: 726.
                                                                                                                                                                                                           /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 767 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="IMAGE:4717874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stop: 7 
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BG570456.1 GI:13578109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20.48
93.59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
```

```
BM466194 Threat EST 95 FEB 2002 ACRNA Threat EST 95 FEB 2002 ACENICATED 6456974 NIH_MSC_92 Homo sapiens cDNA clone IMAGE:5576939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                 2600 GCAFGGATACCTCAAACAAAGAGAAATGAAGAATGTCAAGAACGTTGGTGGACACTGTG 2559
                                                                                                                                                                                      2/20 TATGGCCACATTTAATATCTTCAGCTCTTTTGTGGATATAAAATGTGCAGATGCAATTG 2779
                                                                                                                                                                                                                                                                  2849 TOTTGERAAATOTOOOTATTAAAAAQITGTAGCAGATTGITTGETGTTOTAAAAA 2899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2960 CTGTGTGTGACTACTTTGCCCTTCTTTTGTAGGATGATGTTTGCTCTTGTTTATT 3019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8020 AATTIATATGTATATILEFFAATTTAACATGAACATCCTTAGAAAATGTGTGTTGTG 3079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3080 TCTTCCAAATGCAATTTGATTGACT-GGCCATTGACCAAAATAATGCTGAAGTCTTGTGC 3138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         §1.39 AAAAATGGATATTATTAGAAATTAGAAAAAATTACTAATTTTAGAGATTAGATTTTATT 3198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3199 TTACTATTGGARTCLGATATACTGTGTTTTTATAAAATTTTGCTTTTTAAAAT 3258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2660 TAGACHTIGGALICALIGICICTCACAGAIGACIGIALAACHTICCCAGGTTCTGTT 2719
                                                                                                                                                                                                                                                                                                                                                                                                                 2900 AFTGGTGGGTTTATGGATAGTAAGAATGGGCCCTAGAGTGGCAAGTCCTGATAACCCAGGC 2959
                                                                                                                                                                                                                                                                                                                                                                                                                                       241 TOTIGIGIAAATGCTGCCATITAAAAAGIIGIAGCAGATIGITIGGIGIGGAAAGIAAA 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541 AAAAATGGATATTATTAGAAATTAGAAAAAATTAGTAATTTTAGAATTTTAGATTTTATT 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NIH-MGC http://mar.nci.nih.gov/. National Institutes of Health, Mammalian Gene Collection (MGC)
 4; Gaps
                                                                         1 GCAFGGATACCTCAAACAAGGAAGGAAATGAAGGATCTCAGGGACCTTGGTGGACACTGTG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        719 CCTCAGAAIGIGTAAAAAAITACITIATIIGITIGAICCAAAITAT 367
O; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HM466194.1 GE:18515236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 472)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (1999)
Matches 747; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mENA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5', mRNA
BM466194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       umdn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NEET INTTENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    - FREIANTSM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JUNEANAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BM45.6.194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .....................
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   H. MO 3.
                                                                                                                                                 Ě
                                                                                                                                                                                                                          =
                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                  â
                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       \tilde{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
```

```
Email: eqapbs-r fmail.mih.gov
VERSION
KEYWORDS
```

```
7
                                                                                                                                                                                                                                                                                                                                                                                                 Zite_2: Sall; Cloned unidirectionally, olido-dT primed.
Site_2: Sall; Cloned unidirectionally, olido-dT primed.
Average insert size 2.5 kb. Library enriched for full length clones and constructed by Lite Technologies.
Int. is a NH_MGC Library.

184 c 169 q 323 t.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2656 TGTGTACACCTCTGGATTCATTGTCTCACAGATGTGACTGTATAACTTLCACAGGTTC 2715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3136 TGCAAAAATGGATATTATTAGAAATTAGAAAAAATTACTAATTTTAGACATTAAGATTTT 3195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2596 GATAGCATGGATACCTCAAACAAGGAAGAAATGAGGATCTCAGGACCTTGGTGGACAC 2655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2776 ATTGTTTGGGTGATTCCTAAGCACTTGAAATGTTAGTCATTGTTATTATAAAAATIG 2845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2836 AAAATGTIGIGTAAAIGGIGGGATTTAAAAAGIIGFAGGAGATTGIIITTTTTTITTTT 2895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2956 AGGCCIGICIGACIIISMCIICHHIGIAGCAIAIAGGIGHGCTCTTGTTT 3015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8016 TATTAATITTATATGTALATITTTTAATITTAACATGAACACT FAGAAAATGTGTCOTA 3075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -076 TCTATCTTCCAAATGCAATTGATTGACTGCCCALTCACCAAAATTALCTTGAACTCTTT 3135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA Library Preparation: Lite technologies, the CONA Library Arrayed by. The L.M.A.S.E. Consortion (LLNL) DNA Sequencing by: Apercount Biosociemee Corporation (Llnn.) Clone distribution; MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241 ATTGTTTGGGGGGATTGGTAAAGGGACTTGAAATGTTAGTTGGTATTATAGAAGATTG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481 TATTAATTTATAIGTAITTTTTTAATTTAAGATGAAGAGGAAAATGTGTGGGTA 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 GAFAGCATGGATACCTCAAACAAGGAAGAAATGAGGATGTCAGGAGTTTGGTGAAGAC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6.; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 CATCACAAACTGGCAGAATGACTTCTACTCGAAGAAGGAATGGAAAGGAAATGAAT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2716 TGTTTATGGCCACATTTAATATGTTCGTTCTTTTTGGGGAYATAAAAFGLCVAGARGYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 AAAATCTTGTGTAAATCCTGCCATTTAAAAAGTTGTAGCAGA110111100101100AAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2896 TAAAATTIGGTGTGTGTTTATGGATAGTAAGAATGGCCCTAGAGTGGGAGTCCTGATAACYY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20.4%; Score 691.8; DB 13; Length 972;
                                                                                                                                                                                                                                                                                                                                                       /Lissue_type="embryonal carcinoma, cell line"
/lab_host "DH10B (phage:resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. 4e-124;
0; Mismatches 19; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              http://image.llnl.gov
Plate: LLAM12329 row: j column: 12
                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/db_xref:"taxon:9606"
                                                                                                                                                                                                                                                                                                                              /clone_lib-"NIH_MGG_92"
                                                                                                                                                                                      Bigh quality sequence stop: 621.
                                                                                                                                                                                                                                                                                                          /elone="IMAGE:5576939"
                                                                                                                                                                                                                 Location/Qualitiers
issue Procurement: Alor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 96,78
Matches 728; Conservative
                                                                                                                                                                                                                                     . 972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                     Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
```

```
PM453724 Inhear EST 05-FEB-2002 ACFNICHT_6402343 NTH_MGC_72 Home sapiens epwa elem image fc28814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mstr:Torgan skir Vetter PMV Sportf, Site. 1 Not., Site_2: Sall; Cloned unidirectionally. Primer: Oligo dr. Average insert size 2 Kb. Library constructed by Life Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryola, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
C195 AITTIACIALIGGAAICICALAIACACA:----TGCTTGTTTTAIAAAAITTTGCTTTT 3250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1497 ACGATGTGAACATCGAATCATGGAATCCTTGCTTGCATGGCTCTCAGATTCAGCTTTATTTGA 1556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12.3. AGCAAO TCAGCCIICCAGACCCAGAAGCAIIGAAATCTACTCTCTCTCAGGIIITA 1296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14.17 ICLIAATOLICCICICCAGAALAALCACAGCAGCAGATAIGIAFOTITCICCIGIAAG 1676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             557 ICITATIAAACAAICAAAGGAFGGAGGAAFGAAFFGAAFFGAAFFFGAAFFFGTGT 1616
                       chwa Library Preparation: Life Technologies, Inc. cDA Library Arrayed by: The LM A G P Consortium (LLNL) bNA Sequencing by: Apencourt Rioscience Corporation clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.3. ACGA DERGAADATOGAA FOA FOAGAADOGGETGOATOGOTOTOAGATEGAGOTETAA FETAGA (72)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            longth pos;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /Lissue_type="melanotic melanoma"
/lab_host="DH10B (phage=resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20 0%. Swyre 679; DR 13; 1
100.0%; Prcd. No. 1.4e-120;
Live 0. Mismatches 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          137 q 233 t.
                                                                                        4251 AATHAAATAAAAGCT-GGAAGCAAAGTATAACC 3282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   http://image.lini.gov
Plate: U.AMl2206 row: c golumn: 07
                                                                                                               221 ATTAAGATAAAAGCTGGGAAGCAAAGTATAACC 753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cgapbs-r@mail.nih.gov
Tissue Procurement· ATCC/DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism-"Homo sapiens"
/db_xref-"taxen.9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 High quality sequence stop: 647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "ST OPM HIN" dil onclo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone-"IMAGE:5528814"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NIH-MGC http://mgr/nri mih grv/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualitiers
                                                                                                                                                                                                                                                                                                                BM453724
BM453724.1 GI:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 835)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            210 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (1999)
                                                                                                                                                                                                                                                                                             mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .835
                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bost Local Similarity
Marthes 678; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              754 a
                                                                                                                                                                                                                                                                                                                                                                                          human.
                                                                                                                                                                                                                                                                                                                                                                EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Curry Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOUTH
                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                                                                                                                                                                                                     RESULT 14
BM454724
                                                                                                                                                                                                                                                                                                                   A VESTOR
                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEFFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOHNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RIGIN
                                                                                                                                                                                                                                                  17 X 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
```

```
BIBDB359 672 bp mRNA linear BST 11 cct -2001 c033923338" NIE_MSC_30 Homo sapiens CDRA clone :MACD.5102622 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="IMAGE:5402622"
/clone="IMAGE:5402622"
/clone=lib="NHH_MGC 90"
/tissuc_type="adenocarcinoma, cell line"
/lab_host.="adenocarcinoma, cell line"
/lab_host.="Illos (phage-registant)"
/note="forgar: liver; Verior: prMV-spipfi; Site_1: Not1:
Site_2: Sall: Cloned unidirectionally; oligo 3T primed.
Average insert size 1.7 kb. Library onriched for full:longth clones and constructed by Life lechnologies.
Note: this is a NHHMGC library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eskirys'i, Mesara, Chordata: Cramiata: Vertebrata: Estelenctomi:
Mammalia: Estheria: Primates: Catarrhini; Hominidae: Homo
                                                                                                                                                     1857 TGAGGACCCAGAAATTAGAACATATCATGTGGACCCTTTTCCAGCACACCCTGCAGAATGA 1916
                                                                                                                                                                                                                                                      1917 CTATCAACTGATGAGAGAGAGGCATTTGGACCAAATTATGATGTGTTCCATGTALGGGAL 1976
                                                                                                                                                                                                                                                                                                                                                           1977 ATGCAAAGTGAAGATATAGACCTTAAATTCAAAATGATTGTAACAGCATACAAGGATGT 2036
                                                                                                                                                                                                                                                                                                                                                                                                                                                            2037 ICCTCATGCTGTTCAGGAGACAITCAAACGIGIIIIGAICAAAGAAGAAGAGGAGTATGATIC 2096
                                                1797 TAAAAAAGURUMAURGREGETARIKTEEGGGGTAAATAGAGTITGIGAAGGCGTURIGIG 1856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2097 PATTATAGTATTGTATAGTGGGTGLIGATGCASAGAGTGAAAACAAATALLITGGAGTA 2156
                                                                                                                                                                             DNA Sequencing by: Incyte Genomics, Inc.
Cloud distribution, Mis Giour distribution information can be
found through the I.M.A.G.E. Consortium/LINL at:
http://mage.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         253 AGIAATTITAATTITAAGATTIAGAGAAGAAAIISAAAIGTACCICTITCACIGIIIIA 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nim MSC http://mgcinci.nih.gov.
National institutes of Health, Mammallan Gene Coilection (MGC)
                                                                                                  313 TAAAAAAGTGTATGGGGTAGGGTALCLGCGGGTAAATACAGTTTGTGAACCCTLGLGTC
                                                                                                                                                                                                                                                                                                                                                                                 The L.M.A.G.E. Consortium (Linkli)
                                                                                CDNA Library Preparation: Life Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Plate: LLAM12026 row: k column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 668.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               High quality sequence stop: 6
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email. cqapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BI868359.1 GI:16042032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2157 FGCTFCCACCAGGCCCC 2174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  673 IGCIICCACCAGGCCCCC 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 672)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          228 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BI868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NOTTINITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B1868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                  <u>}</u>
                                                                                                  3
                                                                                                                                                                                                                                                        οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ö,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
```

```
_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2238 CITCAGGTGITITTGIGGAIAIAAAAIGIGGAGAIGGAAITGITTGGGTGAITGIAAGG 2292.
                                                                   2258 ATATITGACOUTGAAGAGTOOATATAAAATTTCAGAAGAGTCTGCCAACAACAACAAAAA 2317
                                                                                                                                                                                                                                                                                                                                               2498 PAGAPSAADTAAAGALCTPPGABGAGTCCAAATTGAGGAGAAAGGGGGGGAGAATGA 2557
                                                                                                                                      2318 TGACTCCAAGA CAAGAALC FFAGTA LCAATTGGTGAATGA FTGGGGACT FCTGAGAGAGT 2377
                                                                                                                                                                                                          243H GAAGCAACCTCCTAAACACTGAAAAAACTACGCTTTGATATTGAAGGATCAGATGAAG 2497
                                                                                                                                                                                                                                                                                                                                                                                                                    ZSOB CTTOTACTOGAACGGAATGCAAAAGCAGAAAATGAATGATAGCATGGATACCTCAAACA 2617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2618 AGGAAGAGAGAGAGAGGATCTCAGGACCTTGGTGGACACTGTGTACACCTCTGGATTCATT 2677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2678 GLCLCFCACAGATGFGACLGFAFAACFFFGCGAGGTFCFGFFFAFGGCGACAFFFAAFAF 2737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2798 CACTIGAAAIGIIAGICAIIGIIATTIIAIACAAIIGAA AATCITGIGAAAIGCIGC 2856
                                                                                                                                                       61 TGACTCCAAGATCAAGAATCTTAGTATCAATAGGTGAATCATTCGGGACTTCTGAGAAGT 120
                                                                                                                                                                                                                              241 CAGATGGAAGTAAAGATGTCCCAGGAGAGTCCCAAAATTTCAGCAGAAAACTGGCAGAAAATGA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.21 GTCTCTCACAGATGTGACTGTAIAACTTTCCCGAGGTTCTGTTTAIGGCCACATTTAAIAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  '41 CACITGAAATGITAGICALTGITAITAIACAAGAITGAACAATCITGIGIAAAATCCCGC 600
                                    1; Gaps
                                                                                       19.5%; Score 660; DB 13; Length 672; 99.9%; Pred, No. 4.1c-117; tive 0; Mismatches 0; Indels
                  Best Local Similarity 99,99
Matches 671; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2917 ATAGTAAGAATG 2928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661 AFAGFAAGAAFG 672
   Ourty Mateh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                        5
                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                     ã
                                                                                                                                                                                                                                                                                                     =
                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                            =
                                                                                                                                                                                                                                                                                                                                                                                                                                            Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \stackrel{>}{>}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                         Š
```

Search completed; Janeary 18, 2003, 04:96:59 Job Lime : 3001.45 sees



Genfore version 5.1.3 Copyright (c) 1993 - 2003 Compages Ltd.

January 17, 2004, 18:27:24; Search time 1943.57 Seconds nucleic search, using trame_plus_p2n model M protein Rotti obi:

(Without alignments) 7320.587 Million cell updates/sec

TEMOROFMNISMISNEEK 874 1 MDETALCORERIPENTARA US 09:026 459A 31 4504 Lither Perfect acore: Sections

BLOSUM6.2 Xqapop 10.0 , Xqapoxt Secting table;

Adapra 10.0 , Ydapext Edapop 6.0 , Edapext Delop 6.0 , Delext

16154066 seqs, 8097743376 residues fotal number of hits satisfying chosen parameters:

Maximum DB seq length: 2000000000 Minimum DB seq length: 0

Fost processing: Minimum Match 100% Maximum Match 100% Listing lirst 45 summaries

ammand line parameters:

Medital trainer paramodel logerxib 9 April 1979 | Specification of the Minimal Color of the Color of the Structure of the St OUTEMT pto INDRMICKT HEAPSIZE-500 MINLEN-0 MAXLEN-200000000 USER USD90-26459 FON [1] 18175 Transt 16012003 [52138] 23322 NISPS-6 1GP9 3 No XLEYX INC. MADE LIAMPEDIEP INCOMESORES 0 WALL LOAVING DRV_31MEDDT-120 WARN TIMEOUT 30 THREADS 1 XXADED-10 XXADEPXT=0.5 FOLDED-6 FGAPEXT=7 YGAPOP-10 YGAPEXT=0.5 DELIAP-6 DELEXT=7

ISS of bot * * - while sst dss blu:* *:116 488 mann: * dss_inv:* tom: *:oid_sst dss_rod:* estium:* estom:* em_estpl:* em_estro:* em_bte:* em esthum:* em_estin:* est4:* em estmu:* em estov:* qb est 4:* em estba:* *:885 4b, est 1:* 288 888 888 4 Ē ₫ Ë E + I Ē utabase

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

AW (68244 CM / HIGH BAIS1568 602916108 BAIS1544 AV715544 BCH49050 BURBCOLY BF144857 60179044 AL692790 DKMZp3141 A1646048 vw54al6.x BE549278 601064567 HEGHZHAF RUZ HEGHAMSHAIBE IALEHROS. γ B122 404 3 402 464 278 ALTZ0941 DKFZp762D BL526082 602927177 BE941246 MRO-HTGIS BE164095 QV4 HTGIS BM490416 pupzn.pku AW502887 UL HF HNO RE592220 nt 26c03.x B1696841 603344967 AW951604 EST363674 AA959709 vw54404.S RE285796 601096510 BIR68359 603392330 BP466536 ULM G30p AKSILIA6 Mus muscu RMS61081 AGENCOURI REZZZZZ AGENCODKI RM453724 AGENCODKI BM456728 AGENCOURT Alteot/29 vb27q08.y RFB27047 RC3 HNGUZ C82304 C82304 Leuk BM450031 ACENCYORS AA763411 vw54d04.r AL563757 AE563757 AL599633 DKF2p313P AWSO 4514 UT HE BNO BM475604 AGENCOURT AA763485 VW54101.1 AAG72780 mm76405.1 A:646697 vw54hG7.x AA959836 VW54h01.8 BQZZ0Z75 AGENCOURT ALCO7811 DKF2p 41 40 Description SUMMARIES HG214°HB BE931246 BE16H095 BQ220275 BM475603 BC149050 BF144857 BM45.47.24 BM4500.31 AW 468244 BI151568 A1606529 BF827047 AL599644 BG25.454.4 AV715543 AL692790 AI646038 BE539278 E1526982 BM490416 BM456728 AW504514 HE692220 B1696841 AW951604 HE285796 RCDDDDDD77 BE082846 AWS8 4181 AL:120941 AA959836 ALS:97811 AA76 (41) AA76 4485 A1646097 C82304 Query Match Length DB 5 + 5 8 + 5 8 + 5 7 Score 1208 1111 1056.5 1043 1043 824 815.5 788.5 784 1254 1236.5 1016 1013 1004 882 879.5 864 F 858 844 683 833.5 . Result

AKULL246
ANGALA IIIC 19 JAN ZA
Mus musculus 10 days embryo whole body cluA, KIKEN Lull-length
enriched library, clonc:2609017M22:rethnoblastoma 1, tull hisert AK011246.1 GI:12847244 HTC; CAP trapper. AK011246 AK011246 DEFINITION ACCESSION VERSION KEYWORDS SOURCE RESULT 1 AK011246 LOCUS

HIC 19 JAN 2002

linear

III KNA

1364 hp

Mus musculus (strain:0578L/G) 10 days embryo chan to mann, clone_lib:RIKEN full-length enriched mouse chan library clone:2600017M22.

Eukaryota: Metazoa; Chordata; Craniata; Vertehrata; Enteleostomi; Mus musculus

ORGANISM

Mammalia: Eutheria: Rodentia: Sciuroquathi: Muridae: Murinae: Mus.

```
/close_lib "Rikfik full length enriched mouse offA library"
/dev_stage "10 days embryo"
1. .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEDEMPFTFTELQKSIETSVYKFFDLLKEIDTSTKVDNAMSRLEKKYNVLCALYSKLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RICELIYLIQPSSALSTEINSMLVLKISWITFLLAKGEVLOMEDDLV SFOLMLCVVD
YFIKESPPALLREPYRTAALPINGSPYTPREGGNESAKIARÖLENDIR I LEVICKEHE
CNIDEVKNVYFKNFIPFINSLGIVSSNCLPRVESLSKRYFEVVIKNKDLDARLFIDHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /translation-"MPPKAPKKAAAAEPPPPPPPPPREDDPAGDSGPEELPLARLEFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EIEEPEFIALCOKLKVPDHVPRPAWLTWEKVSSVPGTLECYIQKKKELWGICIFIAAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KTEQTER EDSFETERTPRKNNPERRANVTPHTFVRTVMN FQQEMV LLASASDQPSE
                                                                                                             CDNA library was prepared and sequenced in Mouse Genome
Encyclopedia Floject of Genome Emploration Research Group in Riken
Genomic Sciences Center and Genome Science Laboratory in MIKEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Please visit our web site (bttp //greams gso tibon go )p/) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            :::III IIIIIIIIIIIIIIIII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     858 CINNCITGGGAGANAGTITTALCGIGGAGGAALCCTGGAAGGAIAIATATICAAAAGAAG 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22 LeafhrTryGluLysValSerValAspGlyValLeuGlyGlyTyrilleGloLysLys 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 AspPhcThrAlaland;sGlnLysLeaLysIleFioAspHisValArgGlnArgAlaIrp 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="data source:MQD, seurce key:MG1:97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref-"FANTOM_DB.2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        307 g 346 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xret-"Mdb:MG1:1995260"
/db_xret="taxon:10090"
/clone-"2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="G1:12847244"
/db_xref="MGD:MG1:97874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Mus musculus"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /protein_id-"BAB27493.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US:09 026 459A 31 (1 874) x AK611246 (1 1364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NLISYFNNCTVNP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    evidence: 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /qene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .>1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene-"Rb1"
       Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1679.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FUR 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96.348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               89.868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               364
                                                                              further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Host: SOLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ouery Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kawai, J., Shinaqawa, A., Shibata, K., Yoshino, M., Itoh, M., Ishii, Y.,
Arakawa, T., Hara, A., Fukunishi, Y., Konno, H., Adachi, J., Fukunda, S.,
Alzawa, K., Izawa, M., Nishi, K., Kiyosawa, H., Kondo, S., Yamanaka, I.,
Sairo, I., Cararak, Y., Caristi, T., Kasukawa, T., Saito, R.,
Kadota, K., Matsuda, H., Ashburner, M., Batalov, S., Casavant, T.,
Fleischmann, W., Gasterland, T., Gissi, C., Kinq, B., Kochiwa, H.,
Kuchi, P., Lewis, S., Antsuo, Y., Nikaldo, I., Pesole, G.,
Ouackenbush, I., Schrimt, L. M., Sraubli, F., Suzuki, P., Tewita, M.,
Manneri, J., Washiort, Sakai, K., Ckido, T., Furuno, M., Aono, H.,
Haldarelli, P., Harsh, G., Hake, J., Moffelli, D., Bollung, N.,
Carninci, P., de Bonaldo, M.F., Brownstein, M.J., Bull, C.,
Fletcher, C., Fujita, M., Gariboldi, M., Gustincich, S., Hill, D.,
Holmann, M., Hume, D.A., Kamiya, M., Lee, M. H., Lyons, P.,
King, B., Kingwald, M., Kodriguez, I., Sakamoto, N., Sasaki, H.,
Sato, K., Schonbach, C., Seya, T., Shihara, Y., Storch, K.,
Book, K., Randy, K.H., Weltz, C., Williake, C., Wilming, L.,
Book, K., Randy, K.H., Weltz, C., Wilming, L.,
Book, K., Randy, K., Well, M., Weltz, C., Wilming, L.,
Book, C., Soya, C., Schall, M., Malla, M., M., Weltz, C., Wilming, L.,
Book, C., Soya, C., Schall, M., Randy, R., W., Well, M., M., Weltz, C., Wilming, L.,
Book, C., Schall, M., Randy, R., M., Weltz, C., Wilming, L.,
Book, C., Schall, M., Randy, R., R., Well, M., M., Well, M., M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Well, M., Wel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Adachi, J., Alzawa, K., Akahira, S., Akimura, T., Aono, H., Arai, A., Arakawa, C., Haldarolli, P., Hono, H., Brownstein, M., Halt, C., Carrinel, P., Fukuda, S., Fukunishi, Y., Furuno, M., Hanagaki, T., Hara, A., Hayatsu, N., Hill, D., Hiramoto, K., Hiracka, T., Hori, F., Hume, D., Imotani, K., Ishi, Y., Toth, M., Isawa, M., Keya, S., Krihara, C., Matsuyama, T., Konon, H., Kenda, M., Keya, S., Krihara, C., Matsuyama, T., Miyazaki, A., Nishi, K., Nomura, K., Nomuraki, R., Ohno, M., Ckazaki, Y., Shidara, Y., Shidara, Y., Shidara, Y., Shidara, Y., Shidara, S., Sati, M., Sati, C., Sakai, K., Sano, H., Sasaki, D., Sodibata, Y., Shibata, Y., Shinagawa, A., Shiraki, T., Sodabe, Y., Shiraki, T., Tapani, M., Taqawa, A., Takahashi, F., Tunaka, I., Tejima, Y., Toya, T., Yamamura, I., Yamanaka, I., Yashila, A., Yoshida, K., Yoshino, M., Muramalsu, M., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Shibata, K., Itoh, M., Alyawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konoo, H., Akiyama, T., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamuata, S., Havama, M., Nishino, I., Harada, A., Fujiwake, S., Locus, M., Sakaguchi, S., Ikogami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Irawa, M., Ohara, E., Watahiki, M., Vohara, E., Mishiwagi, K., Yohara, E., Mishiwagi, K., Yohara, E., Mishiwagi, K., Pikenda, Y., Mishamafsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y., Piken intagrated sequencing pipeline with 384 multicapillary sequencer
                                                                                                                                                                                                                                                      Carminei, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Miramaisu, M., and Bayachi, aki, Y. Miramaisu, M., and Bayachi, aki, Y. Miramaisation and subtrartion of captirapper selected chung to prepare tull-length discovery of new genes Concer Res. 10 (10), 1417-1430 (2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (10-JUL 2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Volchama Institute: 17-22 Stabire cha Teurnaith, Vakhama, Kanagawa 230-0045, Japan (B-mailigenome-reseges: Fiken 90-jp, URL: http://grnome-rs/riken.go.jp, URL: http://grnome-rs/riken.go.jp,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wyoshaw Boris,A., Yoshida,K., Haseqawa,Y., Kawaji,H., Kohtsuki,S.
and Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Functional annotation of a full-length mouse cDNA collection
                                                                      High efficiency full-length cDNA cloning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nature 409 (6821), 685-690 (2001)
                                                                                                         Meth. Enzymol. 303, 19-44 (1999)
                                   Carrillol. P. and Hayashizaki, v.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 1364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21085660
                                                                                                                                                                                       10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                  20499374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11217851
                                                                                                         JOURNAL MEDICT ME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
MEDICINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDS : NE
PUBMED
KEFEKEN, E
                                       AULHERS
                                                                                                                                                                                    PERMISS
                                                                                                                                                                                                                           T. NORTHER
                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTH: RS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           J-CHNAL
                                                                                                                                                                                                                                                                                                                                                                                                               LILKNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PITEMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                    LILLE
```

```
mRNA Linear EST 20-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGENINALIKE 656613 NIH_MGC_67 Homo sapiens con clone IMAGE:5550905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo Sapiens
Enkaryota: M-tazoa; Chordata; Craniata; Verrebrata; Enteleosfomi;
Mammalia: Eutheria: Primates: Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TEB AGGCGAGAAAAAAAAAAGGCTGATGAAGAAGGCAAAACGTGGTTACTGCGCACACTCCAGTT 1257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      402 ThrProArgLysSerAsuLeuAspGluGlaValAsnVallleProProHisThrProVal 321
                                                                                                                                                                                                                                                                                                                                                             222 ValtoufystyschuffischufysAsnileAspChuValtysAsnValtyrPhetysAsn 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      242 PhelleProPheMetAsnSerLeuGlyLeuValThrSerAsnGlyLeuProGluValGlu 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  282 PhotouAspHisAspLys1brLeuGInThiAspSerlleAspSerPheGluThrGlnArg 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               322 ArqibiValMetAsnihrileOlnGinLeuMetMetlieLeuAsnSerAlaSerAspGln 341
                                                                                                                                                            142 HethrethenenkenAlaysölyöluValkenölnMetGluAspAspicuValHeSer 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      THE FILL MATERIAL STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             182 LysellaProTyrLysThrAlaValIIeProIIeAsnGlySerProArqThrProArqArq 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       H3H AGAGACCATACAAAACACTGCACTCCCCATTAATGCTTCACCTCCAACACCCCACAGAGA 897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     202 GlydinAsnargSerAlaArgileAlaLysGInLendluAsnAspThrArgileIleGlu 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NIH MOT http://mac.is.limih.ac./.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                          5.00 AAAGAAATCGATACCAGTACCAAGGTTGATAATGCTATGTCAAGACTATTGAAGAAGTAT 597
                                                                                                                                                                                                                                  S98 AATGIGITATGIGGAATTAGGAAATTAGAAGGAGGTGTGAAGTTATATTTGACA 657
                                                                                                                                                                                                                                                                                                                    122 GluproSerSerSerHeSerThrGluHeAsnSerAlaLeuValLeuLysValSerTrp 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 162 PhothnouMetLouCysVallauAsplyrPhothetysLeuSerProBroMetLauLeu 181
1051 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BM561083.1 GI:18806043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 1051)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BMS61:083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TRUANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 2
BM561084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                              <u>2</u>
                                                                                                                                                                                                                          ÷
                                                                                                                                                                                                                                                                                                                25
                                                                                                                                                                                                                                                                                                                                                                                          ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \stackrel{>}{>}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \stackrel{>}{\sim}
```

```
Znote-"Organ: eye: Vector: pCMV SfoR:5; Site,1: Not1:
Site_2: Sally Cloned unidirectionally. Frimer: olido dT.
Average insert size 1.75 Kb. Library constructed by Lite
Technologies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cDNA Library Preparation: Lile Technologies, Inc., CDNA Library Arrayed by: The L.M.A.G.E. Consortion (LLNL) DNA Sequencial by. Agency at Hisscience Corporation (Clone Cistribution: MGC clone distribution: information can be found through the L.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       484 ANICERCEICECONGAIAALGACACIGCAGCAGALALGIADIIICECCEGIAAGATCT 544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             439 ValValMetAlaThrTyrSerArgSerThrSerGlnAsni@uAspSerGlyThrAspLeu 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            184 GTTGTAATGGCCACATATAGCAGAAGTACACAGAATCTTGALLCTGGAACAGATTTG 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  459 SerPheProTrpIleLeuAsnValLeuAsnLeuLysAlaPheAspPheTyrLysValIle 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         804 GAAAGTITIAFCAAAGCAGAAGAACTIGACAAGAAAATGATAAAACATITAGAACGA 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           539 AsiiLeuProLeuGliiAsiiAsiiHisThrAlaAlaAspMetTyrLeuSerProValArqSer 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               399 TyrTyrArqValMetGluSerMetLeuLysSerGluGluGluArqLeuSerIleGluAsn 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                419 PheserLysLeuLeuAsnAspAsmIlePheHisMetSerLeuLeuAlarysAlaLeuGlu 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      479 GluserPhelleLysAlaGluGlyAsnLeuThrArqGluMetIleLysHisLeuGluArq 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       499 CysGluHisArglleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeu 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       519 HeLysGinSerLysAspArgGiuGlyProThrAspHisLeuGluSerAlarysProLeu 538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 GCTGTGGGACAGGGTTGTGTGTGAAATTGGATCACAGAGATACAAACTTGGAGTTCGCTTG 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 others
                                                                                                                                                                                                                                                                                                                                                                              /lab_host-"DH10B (phage resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                        /tissue_type="retinoblastoma"
                                                                                                                                                                                     Plate: LLAM12263 row: m column: 18
High quality sequence stop: 737.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 66.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-026-459A-31 (1-874) x BM561083 (1-1051)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                         /ordanism-"Homo saprens"
                                                                                                                                                                                                                                                                                                                                    /clone_lib-"NIH_MGC 67"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  : sdp()
                                                                                                                                                                                                                                                                                            /db_xret-"taxon:9606"
/clone:"IMAGE:5550905"
                   Email: cgapbs::/mail.bib.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                 Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    197 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2.040-156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1551.00
93.26#
91.50#
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        221 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34.448
                                                                                                                                                                                                                                                  .1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      330 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                         Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                   FEATURES
  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ü,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       òγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
```

559 Protystystysdlyser fhr thrat gvalasnser thral aasna ladhilhed thala 578

Unpublished (1999)

I UKNAL.

		wLeuserGlu 618 	nAsnGlutyr 638 	10171111111 	678 903	TyrAspser 697 	*ASSELS: 714 	mRNA linear EST 02-MAY-2002 saptons cDNA clone !MACB:6044522		ta. Enteleastomi, dae: Homo.	Collection (MGC)		_	rmation can be				line"	T6; Site_1: NotI; oligo-df primed.
COANGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	ThrSerataPheGluThrGlutysProtoutysSorThrSorTouSorToutheFyrtys 	LysValTyrArgLeuAlaTyrLeuArgLeuAsnThrLeuCysGluArgLeuLeuSerGlu 	HisProdluLeuGluHisIleIleTrpThrLeuPheGluHisThrLeuGlnAsnGluTyr 	GTULNUMNETATGASPATGHISLOUASEGIGTLOMETMELÖYSSETMETTYTGTYTTEPS TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	LysVallysAssileAsp-LeuLysPheLysIleIleValThrAlaTyrLysAspLeuPr 	PHEALAVAIGLEGHUTAFPHELSSARAVAL Leutlelysglughudg. TyrAspser 697 	Helleval FherymasssorvalPheMergloulysmoarento-714 H	HU22-275 AGENTOURT_7572621 NIH_MCC_92 Home sapiens CDNA 8 5, MBNA sequence	BQ220275 BQ220275.l GT:20401675 EST.	Homo Sapiens Entraviación Metagra: Cherdata, Craniata Vertebrata, Entel- Mannalia: Enteria: Primates: Catarribi: Hominidae: Hom	/. Mammalian Gene	Contuct: Robert Strausberg, Ph.D. Email: caapbs-rémail.nih.gov Tissue Procurement. ATCC	chNA Library Preparation. Life Technologies, Inc. CDNA Library Arrayed by The LWAGE Fonsorfium (ILNI DNA Sequencing by Agencuirt Riescience Corporation	lone distribution: MGC clone distribution into through the I.M.A.G.E. Consortium/LLNL at the Vilmand 11st second	derivation of the column: 03 and one of the columns	Location/Qualifiers	/organism="Homo sapiens" /dh_atel="takon.9606" /clone="!NAGE:6044522"	Zejone jib-"NTH_war 42" Zissue_Lype-"embryonal carcinoma, cell Zah best-"3310m (chana resistact)"	/mote_Torqun testis, Vector; pCMV-SPOI Site_2 - Sali; Cloned undirectionally; Avorage insert size 2 5 kt. Libeary en
	\$7.0 \$0.0	47 599 Lysv 111 3b 664 AAA0	Cy 619 Hish 111 5b 724 CACC	CY 649 Glul 111 Fb 784 GAA	9y 659 Lysy 111 Db 844 AAA	Oy 678 office [11] [1b] 904 ICA	vy 598 11e	RESULT 3 HQ220275 LOGUS DOFINITION AC	ACCESSION BG VERSION BG KEYWORDS ES	Σ	REFERENCE I AUTHORS N (TILE NO				1 2 a	FEATURES			

155 9

149 €

ರ

BASE OF CREEK

```
313
                                                                                                                                                                                                                                                                                   234 GluAssAspThfAlgileIle3luValteutysLysGluBisGluCyaAsmIleAcpGlu 233
                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     £5.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ÷6÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         394 LeuGlyValArgLeuTyrTyrArgValMetGluSerMetLeuLysSerGluGluGluArg 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      414 LouSerlicCinAsnPhcScrigsLouLeaAshAshAile:PhcHisMetSer-Loud, 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       663 GAGAAATITIGGTAAAAGOTGTGOGACAGGGTTGTGGAATTGGATGGATGGATGGATGAGAA 722
                                                                                                                                                                                           334 GlulysFle-Alat, 3AlaValGl, GluGl; C, AVALC, alleG., GerglaArgTyrLys
                                                                                                                                                                             174 lysteuSeritoltoMettaukeulysGlanroTyrtysfhrAlaValilerrolleAsn
                                                                                                                                                                                                                                 194 GlySerFroArgThrFroArgArgGlyGluAsuArgSerAlaArgIleAlaLysGlnLeu
                                                                                                                                                                                                                                                                                                  254 SerAsnolyLeuProSluValGluAsnLeuSerLysArqTyrGluGluIleTyrLeuLys
                                                                                                                                                                                                                                                                                                                                                                                                      274 AsnLysAspLeuAspAlaArgLeuFheLeuAspHisAspLysThrLeuGlufhaAspSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            294 lleAspSerPheGluThrGlnArgThrProArgLysSerAsnLeuAspGluGluValAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                334 IleLeuAsnSerAlaSerAspGlnProSerGluAsnLeuIleSerTyrPheAsnAsnCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              363 AAIAAAGAICIAGAIGGAAGAIIAIIIIGGAIGAIGAIAAAAGICTICAGACIGAICI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             314 ValileProProHisThrProValArgThrValMetAsnThrileGlnGlnLeuMetMet
                       Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             423 euAlaCyoAlaLeuGluValValMetAlaThrTyrSer 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
                                                                                                   US-04-026-459A-3! (1 874) x RQ220275 (1-881)
        2,07c-145
1448.00
98,30%
97,96%
32,15%
                                               Best Local Similarity:
                                   Percent Similarity:
Alignment Scores:
                                                              Query Match:
            .
Ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
BM475603
            Pred
                                                                                                                                                                                                                                 Č.
                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                          £
                                                                                                                                                                                                                                                                                                                                                                                        ó
                                                                                                                                                                                                                                                                                                                                                                                                                  چ
                                                                                                                                                                                                                                                                                                                                                                                                                                         ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 扫
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ά
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ĉ
```

```
German Genome Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Department Lehrach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   հստաո
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESS TON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOHNANAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                 ŝ
                                                                                                   <del>2</del>
                                                                                                                                                                                                                                                      2
                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                            d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                   ;~;
;~;
                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                         ö
      EST 05-FEB-2002
                    ACHINCOURT 6480007 NIH_MCC 92 Homo sapiens con clone IMACH:5575683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note-"organ: testis; Vector: pCMV SPORT6; Site_1: Not1; Site_2: Sall; Cloned unidirectionally criss-fr primed Average insert size 2.5 kb. Library enriched for full-length clones and constructed by Life Technologies. Note: this is a NH_MGC Library."
                                                                                                                                                        Eukaryota; Metazoa: Chordata: Craniata; Vertebrata; Buteleostomi;
Mammalia: Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                               cona library arrayed by: the L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Appropriation
DNA Sequencing by: Appropriate Hoserbence Corporation
Long distribution: MGG clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
http://maqe.llnl.goz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NIH MGC http://www.nci.mih.gov/
National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81 LeutyschulleAspThrSerThrLysValAspAsnAlaMetSerArqLeuLeuLysLys 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101 TyrAspValLeuPheAlaLeuPheSerLysLeu GluArqTbrCysSluLeuIleTyrLe 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98 TATGATSTATTGTTGCACTCTTCAGGAAAATCGGGAAAAGGACGTGAACTTATATATT 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120 uthrefineroSerSerSerTleSerThrGtn11eAsnSerAlatonValLeutysVa1Se 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        228 FIGALTTCASTIAAIGCIAAGGCGTTGGCGTTGATTTATTAAAGTGTGGCGATGTF 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180 aleallyschuptolythystha Alavallieprotie Asaidiyser proArqthr ProAr 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      38 GLONDAGIAALIGALANGAGIANGAAAGIIGALAALGCIATGAAAAGIIGAAGAGIATIGAAGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue_type-"embryonal carcinoma, cell line"
/lab_host-"bHl0B (phage resistant)"
      linear
                                                                                                                                                                                                                                                                                                                                   cona Library Preparation: Lite Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         281
10
10
10
4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
      HKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismalches:
                                                                                                                                                                                                                                                                                                                                                                                                                                               Plate: LLAM12326 row: f column: 04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US 09 026 459A 41 (1 874) x BM475603 (1:1001)
                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /orqanism "Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence start: 17 High quality sequence stop: 734.
1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone-"IMAGE:5575683"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zelone lib-"NIH MGC 92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xrot-"taxon:9606"
                                                                                                                                                                                                                                                                                          Email: equpbs rimail nih qev
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualitiers
                                                                               BM475603.1 GI:18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ].48e--] 33
                                                                                                                                                                                               1 to 1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1349.00
93.878
90.658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81 6.67
                                                                                                                                                                                                                                                    Unpublished (1999)
                                      57, mKNA sequence.
BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .1001
                                                                                                                                        Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
                                                                                                                                                                                               (bases
    BM4754,03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                     hountain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A.A. Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ouery Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14.0 TH/055
                      Notional
                                                                                                                                      - FREANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         THE NO. I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RASE COUNT
                                                                                                                                                                                                                 AUTHORS
1111E
                                                          ATTESSION
                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                      HILLIANA].
                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                               VERSION
                                                                                                                                                                                                                                                                        T. MME.N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MISTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ì
```

```
| 227 bp | mRNA | linear | EST 14 AUG 2001 | EST2519081E_r1 | $13 (synoxym. http://htm.//sapirus cDNA clone | ALS97811 | ALS97811 | G1:15160502 | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST. | EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
Bukaryotas Metazoas Chordatas Craniatas Vertebratas Enfelcostomis
Mammalias Entherias Primatess cataribinis Hominidaes Homo.
1 (bases 1 to 727)
Pousika.A., Wellenreuther.R., Mewes.H.W., Weil, R. and Wiemann, S.).
Est (Pousika.A., Wellenreuther.R., Mewes.H.W., Weil, R. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Research Center (DKEZ): Email s.wiemannadktz heidelberg.de;
sequenced by DKFZ (German Cancer Research Center,
Heidelberg/Germany) within the chwA sequencing consortium of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Close from S. Wiemann, Molecular Genome Analysis, German Cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240 SASTPhotherreligible tasks servers programmers as a saming a literatural servers and the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the servers of the ser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ÷00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   200 qArqGlyGlbAshArqSerAlaArqIleAlaLysGlbLeuGlbAshAyHhArqIl-11, 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  458 TGAAGTTCTCTGTAAAGAACATGAATGTAATATAGAIGAGGTGAAAAA1GTTTATTTCAA 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      260 1GluAsmieuSerlysArqTyrGluGluIleTyrLeal, aAshisAshiAhaAr 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300 nArqThrProArqLysSerAsmLeuAspGluGluValAsnVallTeProProHisThrPr 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    340 pGInPreserGlaAsnLeufle-Serfyr PheAsnAsnCysThrVal-AsnPretysGl-359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The Lysellanys 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  878 AAAGCTATACCCGAAAAGAAGGTTAAGGAATATAGGAATAACCTTTTTAAAGAAAAAA 937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               220 eClaVali.cuCystysCieHisCiuCysAaniicAspoluValiqueityiAsiivaliquihmiq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         280 gleupheteuAspHisAspLysThrteuGlrdhrAspsertTeAspserPhediuThrdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       320 oValArqThrValMetAsuThrIleGluGluLeuMetMetIleLeuAsuSerAlaSerAs
                                                                                                                                                                                                                                                                                                                                                                                                359 uSerilleLculysArg ....VallysAspillellyTyriller
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Max Planck-Institute for Molecular Genetics
Threstrasse 74, 14195 Berlin, Germany
Tel: +49-30-84181623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: poustka emping berlin dahlem.mpd.de
This is the 5' sequence of the clone insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   938 TTCTGGCIAAAAGCCIGGGG 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    376 -- PheAlaLysAlaValGly 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Poustka A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fax: +49-30-84141128
```

```
| Alab | h.gri="purphs" |
| Another Ventor: pTriplex2: Stro_1: STITA; Stro_2: STITB;
| cDNA-collection" |
            This clone (DKFZp31300816) is available at the RZPD in Beilin. Please confeat the RZPD: Rossourcenzentrum, Hebbnerweg 6, 14059 Heblin Challottenburg, GTRMANY; Email: clone@frzpd.de. Location/Opalifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          584 PysSorthrsortonSortonPhyPyrtystTsVatTyrArglesAlaTyrleuArgleu 608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              625 LeubhedlüßthrLeudlüAsnGluTyrGluLeuMetArqAspArqBisLeuAspGlu 648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             669 IletheValThrAlaTyrLysAspLeuProHisAlaValGlnCluThrPheLysArgVal 688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           889 LeulleLysGluGluGluTyrAspSerIleIleValPheTyrAsnSerValPheMetGln 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           749 AsulleTyrileSerProLeuLysSerProTyriysileSerfluGlyLeuProThrPro 768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          789 GluLysPheGlnLysIleAsnGlnMetValCysAsnSerAspArgValLeuLysArgSer 808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           809 AladladlyserAssProProTysProLedPysEysLedArtPheAsptledLadlySer 928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             609 AsuThrLeuCyscluArqLeuLeuSercluHisProdluLeuchuluHisHelleTrgthr 628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 AAATOTACTGTGTTTTGACTGTTTTATAAAAAGTGTATGGGGGAGCTATGTGCGGGGTA 61
                                                                                                                         Zelono-mskP2p31300816"
Zelono lib-"313 (synonym· bloc2)"
Zdev_stage-"adult"
                                                                                                                                                                                                                                                                                                                                Conservative:
                                                                                                                                                                                                                                                                                                                                              Mismatches:
                                                                                                                                                                                                                                 130 g 198 t
                                                                                                                                                                                                                                                                                                                  Matches.
                                                                                                                                                                                                                                                                                                  Length:
                                                                                                                                                                                                                                                                                                                                                                 indels:
                                                                                               /organism-"Homo sapiens"
/db_xret-"taxon.9606"
                                                                                                                                                                                                                                                                                                                                                                                                            US 09:526:459A:31 (1-874) x AL597811 (1-727)
No si sequence available
                                                                                                                                                                                                                                                                                               1.37e-124
1254.00
99.59%
99.59%
                                                                                                                                                                                                                               161 c
                                                                                                                                                                                                                                                                                                                                                                 27.848
                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Rost Local Similarity:
                                                                                                                                                                                                                                                                                 All quagent Scores:
                                                                                                                                                                                                                                                                                                                                                             CHOTY MALCh:
                                                                                 SO TOB
                                                                                                                                                                                                                               <u>X</u>
                                                                                                                                                                                                                                                                                                 FFAIURES
                                                                                                                                                                                                                                              NII. IX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
```

```
/tissuc_type="datayonal carcinoma, cell line"
//ab host="pHIOM (phage=resistant)"
//note "Gram. testis, Vertor. pGNV-SPORT6, Site_i: NotI:
Site_2: Sali; cloned unidirectionally; oligo df primed.
Average insert size 2.5 kb. Library enriched for
full-length clones and constructed by Life Technologies.
In this is a NH MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Metazoa: Chordata: Craniata: Vertebrata: Enteleostomi:
Mammalia: Eutheria: Primates: Catarrhini; Hominidae: Homo.

    (bases 1 to 880)

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UNA Sequencing by Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I M A G E Consortium/LLNE at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mis Mar hit 2009 not nih gray.
National institutes of Health, Mammalian Gene Collection (MO?)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     662 GOTGAAGGAAGCAACCITCLAAACCACTGAAAAAACTAGGCTTTGATATTGAAGGATCA 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 103 ValLeufheAlaleufheSorLysLeuGluArqThrCysGluLeuIleTyrLeuThrG1n 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     123 ProSerSerSerHeSerThrGluffeAsnSerAlaLeuValLeutysValSerfrpf. e 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  143 ThrPheLeuLeuAlaLysGlyGluValLeuGlnMetGluAspAspLeuValIleSerPhe 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GTATEGITEGEACTCTTCAGCAAATTGGAAAGGACATGTGAAACTTATATATTTGACACAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cDNA Library Freparation. Life Technologies, Inc. cOna Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               880
255
6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               http://image.llnl.gov
Flate: LLAM13279 row. i column: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib-"NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-926-459A-31 (1 874) x 8QDDDD7 (1-880)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          High quality sequence stop: 606.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref-"taxon:9606"
/clone="IMAGE:6041563"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ločatičn,⊊uslifiers
1. .880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: cqapbs-r@mail.nih.qov
Tissue Procurement: AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ222227
BQ222227.1 GI:20403627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.42e-122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    236.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    92.88%
90.75%
27.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                        , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
                                                                                      829 AspGlu 830
                                                                                                                                                                             722 CATCAN 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                   NOLLINIA AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL.
                                                                                                                                                                                                                                                                   RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                             30222227
30222227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                      ô
                                                                                                                                                                             90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
```

```
BM454724 BST 05-FEB-2002 AGENCINT 6402744 NIH_MGC_72 Home sapiens CDNA clone IMA3E:5528814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapieus
Eukaryota; Metazoa; Chordata; Craniata; Verlebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                 401 CAGAACAGGAGGGGGATAGCAAAACAACTAGAAAATGATACAAAAATTATTATTGAAGTT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                    203 OldASnArgSerAlaArglleAlaLySCInLeuGlnAsnAspThrArglle1leGluVal 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFECTION OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chane distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
THE CASTIAN FOR A REGISTION FOR THE LANGE CONTRACT CONTRACTOR OF STREET OF STREET AND TABLE OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22 t. LendystysdiallisgludysAsnileAspdluValtysAssuValTyrPhetysAsnPhe 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24.5 | LetroPheMetAsuSerLeuGlyLeuValThrSerAsnGlyLeuProSluValGluAsn | 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481 CTTTCTAAAGGATACGAAGAAATTTATCTTAAAAATAAAGATGTAGATGCAAGATTATTT 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28 LeadspilisAspLysThrLeadInThrAspSerrIPASpSerPheGlaThrdlaArqThr 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30 FroArdLysSerAsuLeuAspGluGluValAsuValIPeProProHisThrProValArg 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            323 ThrValMetAsmiltrileGinGinLeuMetMet.Hel.euAsmSerAlaSerAspGln-Pr 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       442 oSerGluAsnLeuIle-SerTyrPheAsnAsnCysThrValAsn---ProLysGluSerI 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721 THEAAAAATGEGATELEHESIAHETTAACGGCEGCAGGGAATGEGAAAAGAAAGT 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ---tysArqValLysAspIleGlyTyrIlePhe-- ---tysGluLysPhe 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chan Library Preparation: Life Technologies, Inc. chan Library Arrayed by: The L.M.A.G.E. Consortium (LENL) ENA Sequencing by: Agencourt Bioscience Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Plate: LLAMI2206 row: e column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Engil: eqapbs r'Hail.nib.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dissue Produrement: ALCC/DCID/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 835)
NIH MOC http://mgc nci nih gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stop: 647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lorent ion/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HM453724.1 GI:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. 845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HM454724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NOLLINITED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OUTTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PENNISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A. Y.P.S.S.L.O.N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULL 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C 19715
                                                                                                                                         Š
                                                                                                                                                                                                                                                                           Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \stackrel{>}{\sim}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
```

/ordanism "Homo sapiens" /db_wrot "taxon:9505"

```
Site_2: Sall; Cloned unidirectionally. Primer: crise di.
Average insert size 2 kb. Library constructed by Lite
Technologies."

1.7 q 2.3.4 t l others
                                    /lab_host="DHLOB (phage-resistant)"
/sote="organ: skin; Vector: pCMV SPORT6; Site 1; Not1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     616 Leuserdluffisprodluteudluffistletterrpfurteurhedluffisfurbeudlu 635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       636 AsnGluTyrGluLeuMetArqAspArqHisteuAspGlb:IleMetMetCysSerMetTyr 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                496 LeuGluArqCysGluHisArqlleMetGluSerLeuAlaTrpLeuSerAspSerProLeu 515
                                                                                                                                                                                                                                                                                                                                                                                                                                                         128 TGTCCTCTTAATCTTCCTCTCTCTGAA1AATCACAGCAGCAGATA1G1A1CTTFCTCTT 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 556 ValArqSerProLysLysLysGlySerThrThrArqValAsnSerThrAlaAsnAlaGlu 575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     368 CTGTCTGAGCACCCAGAATTAGAACATATCATCTGGACCCTTTTTCCACCACACAG 427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           428 AATGAGTATGAACICATGAGAGAGAGAHIIGGACAAAIIAIGAIGTGGTTGGTGTAT 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               656 GlyffeCystysVallysAsnileAsptentysPhetysffelfeValthrAlatyrLys 675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   676 AspteuProHisAlaValGluGluThrPhetysArqValteuHetyssNusluGluTyr 695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          696 AspSerilelleValPheTyrAsnSerValPheMetClnArqLeuLysThrAshlleLeu 715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              716 GINTYFALASerThrArqProPro- ThilosSerProffeProHistle ProArqSe 734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  668 CAGIATGCI FCCACCAGGCCCCTACCT I GTCACCAAN ACCITACACAT 1 FCCAAAG 727
                                                                                                                                                                                                                                                                                                                                                                                                                                      516 PheAspLeufletysGInSerlysAspArgGluGlyProThrAspHisLeuGluSerAla 535
                                                                                                                                                                                                                                                                                                                                                                                   536 CysProLeuAsnLeuProLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   576 ThrGlnAlaThrSerAlaPheGlnThrGlnLysProLeutysSerThrSerTeuserLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     734 rProTyrLys -- - PhoProSerSerProLog And DeFro GlyGlyAsu
                      /lissae_type="melanotic melanoma"
                                                                                                                                                                                                                      Matches:
Conservative:
                                                                                                                                                                                                                                                          Mismatches:
                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                     Length:
Zelone_lib "NIH_MGC_72"
                                                                                                                                                                                                                                                                                                                              US-09:026-459A-31 (1-874) x HM453724 (1 845)
                                                                                                                                                                                                                                                                                            : sdpg
                                                                                                                                                                                                 1,56e-119
1208.00
92,918
91,648
                                                                                                                                                                                                                                                                       36.82%
                                                                                                                                                                                                                                                          Best Local Similarity:
                                                                                                                              254 a
                                                                                                                                                                                                                                     Percent Similarity.
                                                                                                                                                                                  Aliqument Scores:
                                                                                                                                                                                                                                                                       Query Match:
                                                                                                                                                                                                     Pred. No.:
                                                                                                                             BASE COUNT
                                                                                                                                              RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
•
                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                  <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                        ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ^{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
```

```
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA/63411/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OPGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENHAMOO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SCHPCE
                                                                                                                                                                                                                                                                                                                                                                   <u>۾</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ä
                                                                                                                                                                                                                                       ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone "IMARIESSENCE."
/clone_lib="NHH_MCC72"
/tissuc_typo-"mectanerio metanerio"
/tab_host="DHIOB (phage-resistant)"
/sel_nost="DHIOB (phage-resistant)"
/sel_nost="Ship" varior pcMV-SPNFF, site_1 Net.
/sel_nost="Ship" cloned unidirectionally. Primer: Oliqo dI.
                                                                                                                            BM450041 Incar BST 05-FEB-2002 AGENOURIL6393544 NIH_MGC_72 Home sapiens conditional image-fe28037
                                                                                                                                                                                                                                                                               Homo supjens
Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi;
Mammalia: Eutheria: Primates: Catarrhini: Hominidae: Homo
I (bases I to 1023)
NIH-MGC http://mgr.coi.cib.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chone distribution: MGC clone distribution information can be tound through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          659 LysValLysAsnileAspteotysPhetysIletleValThrAlaTyrtysAspteopro 678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      719 SerThrArqProProThrLeuSerProIleProHisIleProArgSerProTyrLysPhe 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18.2 TCCACCAGGCCCCTACTGCTGACAATACCTCACATTCCTGGAAGCCCTTACAAGTT 24.
                                                                                                                                                                                                                                                                                                                                                                                   National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  679 HisAlaValGlnGlnGluTbrPhd ysArgValLentHelysGlnGluGluTyrAspSertle 698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        699 IleVaiPheTyrAsnSerValPheMetGlnArgLeuLysThrAsnIleLeuGlnTyrAla 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             739 PreserSerProteuArgilePreStyClyAsaileTyrileSerProteuLysSerPro 758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 AAAGIGAAGAATATAAACTTAAATTCAAAATGATAGTAAGAGGAIAGAAGGALGTGG1 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cona Library Preparation: Life Technologies, Inc
cona Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA Sequencing by: Agencourt Bioscience Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 281 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Longth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Robert Strausberg, Ph.D.
Email: cqapbs-r@mail.nih.gov
Tissue Procurement: ATCC/DCID/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      http://mage.llal.do.
Plate: LLAM12204 row d column.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /ordanism "Homo sapiens"
/db_xret="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      115-04-026-459A 41 (1-874) x BM450031 (1-1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 High quality sequence stop: 643.
Location/Qualiffors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          197 g
The TheignileSerProbentys 756
                                        788 INIMITICANCCCCTGGAN 809
                                                                                                                                                                                                              BM450031.1 GI:18499071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6.35e-109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1111.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1999)
                                                                                                                                                                     mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24.67%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . .1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Loral Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              334 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                       BM4500
                                                                                                                                                                                                                                                             human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ouer; Match:
                                                                                                                                                REFINITION OF
                                                                                                                                                                                                                                                                               PRIMATISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE CHINI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                            A TESSE N
                                                                                                                                                                                                                                                                                                                                             KEFFERENCE
                                                                                                                                                                                                                                                                                                                                                                   AUTH-RS
                                                                                                                                                                                                                                                                                                                                                                                                          PHINAL
                                                                                                   HM45003
                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                LIMMENT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RISIN
                                                                                                                                                                                                                                                      SOURCE
                                                                                                                            .
3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
```

```
AA76:4411
WA404C11 SOATCS_Mammary_gland_NNIMG Mus musculus chNa clone
WA5404C11 SOATCS_Mammary_gland_NNIMG Mus musculus chNa clone
WA5404C1212599 E'similar to gb:M5400 PHIROBAASCAMA.ASSACHALED
PROTEIN (HUMAN); qb:M26391 Mouse retinoblastoma susceptibility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Marra,M., Hillier,L., Allen,M., Bowles,M., Dictrich,N., bubuque,t., Gessel,S., Kucaba,T., iacy,M., Le,M., Martin,J., Morris,M., Schellenberg, R., Srept,Ce,M., Tan,F., Underwood,K., Moore,R., Thelsing,B., Wylle,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="Vector: pT73D-pac (Pharmacia) with a modified polylinker; lst strand cDNA was prepared from mammary gland tissue from a lactating female, and was then primed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 914)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota, Metabba, Chordata, Cramiata; Vertebrata; Buteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This close is available royalty free through LLNL , contact the IMAGE Consortium (info@lmage.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           759 TyrLysileSerGluGlyLeuProThrProThrLysMetThrProArgSerArgIleLeu 778
                                                                                                                                                                                                                                               819 LystysteuArgPheAspileGluGlySerAcpGluAlaAspGlySerLysHisLeuPro 848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             839 ClyGluSerLysPheGlnGlnLysLeuAlaGluMetThrSerThrArgThrArgMetGln 858
                                                                                                                                                                                                                                                                                                                                                                                                      779 ValSeriteOlyCluSerNeGlyClu SerCludysTheCludysTheCludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcludysTteAstcl
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        859 LysGinlysMetAsnAspSerMetAspThrSerAsnLysGluGluLys 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="Soares_mammary_gland_NMLMG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WashU-HHMI Mouse EST Project
Washington University School of MedicineP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Seg prime: 28ml3 tev2 ET from Amersham
High quality sequence stop: 422,
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /sex-"female (lactating)"
/tissue_type-"mammary aland"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism÷"Mus musculus"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: mouseest Awatson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein (MOUSE);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone-"IMAGE:1247598"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA763411.1 CI:2813158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA763411
```

With a Not 1 oliqo(df) primer, Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not 1 and cloned into the Not 1 and Eco RI sites of the modified pT773 vector. Library is normalized. Library mass constructed by Hento Soares and M. Fatima Bonaldo. " 178 c 217 q 261 t others 922 SertysAspArqCluClyProffnAspHistouGluSerAlaCysProfemAsnLeuPro 541 99 TGGGCTGTTTF05AACCTAFGCAAAATTTATGTGATTTTAAACGCGGGCAAFGAGGGC 738 402 ValMet@luSerMetLauLysSerGlacluS-luArq1euSerT1ectleAraPhesserTys 421 482 [HeGysAladlud]yAsnLeuThrArgGluMetTLEGysHisLeuGJuArgCysGluHis 50] 122 ATPAAAGTOGAAGTOAACTIGACAAGAGAAAIGATAAAAACATIGAGAAGATGTGAGCAT 263 GATAACCTTGAACCTGCTTGTCTCTCAGCCTGCCT 146 942 LenglnAsnAsnHisThrAlaAlaAspMetTyrLenSerProValArqSerProLysLys 561 914 TITITIGGATOCAGAATAAAACCCTCGAGCTGT - TCCTTTAGGCCTTTTTAAAGCGGGAG 857 856 ACCCARDGAAAACCACCLIGI-GAAGGGCGAAACCGGGTTACTGCCCGAGCCGGGTT 798 42 ProSerGinAsidentleSerlyrPheAsiaSidysThrValAsinProLysGiuSerlle 361 7.47 CONTICAGAATINEGIST TOXOTOTOTAATATTGOGOOGGIAACOOOAAAAAAATTOOO 679 882 chashydysValshalleshySershnArqfyrLysLeushyWalArqDeuTyrTyrArg 401 622 CCAGGCTGTGTGACCATCGGAGTACAGCGATATAAACTTTGAGTCCGTCGTATTACCGT 563 562 GEGAEGARATCCATGCTTAGAGGAAGAACGACTTTGTCGAATTTTAGCAAA 503 422 TanianAsnAspAsnTlePhaHisMatSerLeuLeuLeuAJaCysAlaLeuGTuVaTVaTMat 441 442 AlathrTyrSerArqSerThrSerGlnAsnLeuAspSerGlyThrAspLeuSerPhePro 461 462 Trp11etenAsnValLenAsnLenLysAlaPheAspPheTyrLysVallTeGluSerPhe 481 (82 TOSATTCTSAASSTACTTAATTTAAAAGCCTTTGATTTTACAAAGGTGATTGAAAGTTT 323 502 ArqIleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysGln 521 282 PhotographisAsptysThrtcuGtnfhrAspSorffeAspSorPhoStufhrGfnArg 301 42z ArgThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAspGln 341 362 LevitysArqValLysAspileslyTyrilePhetysSluLysPheAlaLysAlaValGly 381 402 Thr ProArqLysSerAsmLeuAspGluGluValAsmVall1FeProProHisThrProVal Conservative: Mismatches: Matches: Indels: Length: 09 026 459A 31 (1 874) x AA763411 (1-914) : sdre 4.1e-103 1056,50 202 TOTAAGATGGAGAAGGACT 82.14% 75.97% 21.468 Percent Similarity: Best Local Similarity: Aliquinent Scores: control Match: Disc HASS COUNT ž N. I. T. Y. Presiden Z.

Ē 1. 골

 $\frac{1}{2}$

ź

Š

1

5

5 4 ã

```
Zhote "ordan, brain, Vector, p.MVSFOki 6, ist strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-stranded cDNA was digested with Not I and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Timear EST 16 FEB 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    eloned into the Not Fand Eco RV sites of the prMVSPGRI 6 vector. Library was normalized, Library was constructed by Lite Technologies. Contact : Feed Liang Life
                                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Metazoa: Chordata; Ctaniata; Vertebra'a; Eufeleostomi:
Mammalia; Eufheria; Primates: Catarrhini: Hominidae: Homo.
                                                                                                                                                                                                                            ALS64757 LIT_NFLOOT_NBC4 Homo Sapiens conA clone 'Subbad7YAOS 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       186 LysThralaVall1eProlleAshGlySerProArqtha ProArqArqGlyGlnAshArq 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               791 AAAACAGCIKITATACCCATTAATGGTICAACCICGAACCAGGGGGGGGGTTAAAAACAGGTA42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              226 GluffisGluCysAsmileAspGluValLysAsmValTyrFhetysAsmPhetTeProPhe 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 206 SerAlaArg HeAlaLysChnleuGluAsnAspThrArg HeTTerHevTuVaHovrystys 225
562 TysclyserThrThrArgValAsnSerThrAlaAsnAlaGluTheGlnAlaThrSerAla 581
                     Genoscope - Centie National de Sequencaqe
BP 191-91006 EVRY cedex - France
Email: sequet qeloscope.cus.ff, Web : www.genoscope.cus.ff.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ξ
                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 792)
Li,W.B., Gruber,C., Jessee,J. and Polayes.D.
Full-length cDNA libratics and normalization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="neuroblastoma_cells"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
Mismatches:
                                                                                                                                                                                                          AN HE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone_lib-"LTI_NFL001_NBC4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                          792 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-026-459A-31 (1-874) x AL563757 (1-792)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:9606"
/clone="csobb007YA06"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualitiers
                                                                              582 PhedinihrdiniysProladiys 589
                                                                                                                     25 TTCCALACTCACAGCCALLCAAA 2
                                                                                                                                                                                                                                                                                       AL563757.1 GI:12913464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9.450-102
1043.00
84.538
81.898
                                                                                                                                                                                                                                       prime, mRNA sequence.
AL564757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /sex-"male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          742
                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hest Local Similarity:
                                                                                                                                                                                                          A1.564757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                              AL564757/c
                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                               RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL.
                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1111E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RIGIN
                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                          SOCOS
                                       ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ें
```

 $\dot{5}$ ã 3

â

```
Clone from S. Wicmann, Molecular Genome Analysis, Octman Cancer Research Center (DKF2), Email s.wiemaun@dkfz heidelberg.de; sequenced by BMF2 (Biomedical Research Center at the Charite, Berlin,Chermany) within the cDNA sequencing consortium of the German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST 14-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia: Eutheria: Primates; Catarrhini, Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.st sequence available. This clone (EKFPATAMOS) is available at the Kibi in Berlin. Phase content the RSZDD. Ressourcenzentrum. Heubnerweg 6, 14059 Berlin-Charlottenburg, GPPMANY: Emall: clone@frzdd.de.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          245 Argiyriluclu Uciyri.culysAsniysAspi.cuAspAlaArgi.cuiAspHis 285
                                                                                                                                                                                                                       Kochrer.K., Heyer.A., Mewes.W., Weil, B. and Wiemann, S.
ESI (Kochrer.K., Heyer.A., Mewes.H.W., Weil, H. and Wiemann, S.)
MetAsuserLeuGlyfeuVilThrserAnnClyLeuProGluVilGluAsnLeuSerLys 265
                                                                                                                                             551 GGAIAGGAAGAATTITICITAAAATAAAGAICIAGAIGCAAGAITAITITGGWTCAI 492
                                                                                                                                                                                             286 Asptysthm.euglinnhraspSerfleaspSerPheGlunhrGlnargThrPioargtys 305
                                                                                                                                                                                                                                                                                        SerAsmienAspGluGluValAsmVallleProProHisThrProValArgThrValMet. 325
                                                                                                                                                                                                                                                                                                                                                                                                          34F LeutlieserTyrPheAsnAsnCysThrValAsnProLysGluSerTleLeutlySArgVal 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    366 IysAspilenlyTyrilePheLysGluLysFheAlaLysAlaValGlyGlnGlyCysVal 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           405 erMetLaulysSerGlüGlüGlüArgLeuSerfleGInAsnPheSertysLeuLeuAsn- 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        425 AspAsnilePheHisMetSerLeuLeuAlaCysAlaLeuGluValValMetAlaThrTyr 444
                                                                                                                                                                                                                                                                                                                                                                                      AshihriledindinicuMctMctileLouAshSerAlaSerAspClnProSerGluAsh 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          131 CCATOCITIATICAGAAGAAGGACGATTATCCATTCAAAATTTTBGCACACTTCTGAATS 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PMFSP313P092_f) 313 (synopym: hloc2) Homo sapiens obNA clogo
DMF2p313P092_5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Am Klopferspitz 18a D-82152 Martinsried, Germany
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This is the 5' sequence of the clone insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              605 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AL599633.1 GI:15162921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 605)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Koehrer K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genome Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     445 SerArgSer 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11 GCAGIAAGI 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AL599633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A1.599633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MIPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PERMISM
                                                                                                                                                                                                                                                                                        900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
Al 599633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A. Y.ESSELIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            K-FFF-NCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1,4,115
```

```
BE982846 EST 12 JUN 54-COL HIGGE ERRA FIGURE FOLK JUN 5000 NGZ BIU042 BIWE Sapiens CONA, ERRA Sequence.
                                                                                                                  /note="Vector, pTriplEx2; Site_1: SfilA; Site_2: SfilB; cDNA-collection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           221 G)uValLentysLysChillsGluCysAsplluValLysAsbValTyrPheLys 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            401 ArgValMetGluSerMetLeuLysSerGluGluGluArgLeuSerileGluAspPheSer 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541 CGAGTAATGGAATCCAFGCTTAAATCAGAAGAAGAACGATTATCCATTCAAAATTTTAGC 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                              261 SluAsnLeuSerLysArgTyrGluGlulleTyrLeuLysAsnLysAspLeuAspAlaAra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GAAGTTOTOTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAALGTTTATTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                    61 AATTITATACCITITATGAATICICTIGGACTIGTAACAICTAATGGACTICCAGAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          281 LeuPheLeuAspHisAspLysThrLeuGlnThrAspSerIleAspSerPheGluThrGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         321 ValArgThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSetAlaSetAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  341 GlufroSer5luAsnLeulleSerTjiFheAsnAshJjsTluValAshitoLjsGluSer
                                                                                                                                                                                                          605
201
000
000
                                                        /cione="WKFZp313P092"
/cone_llb="313 (synonym: hlcc2)"
/dev_staqe="adult"
/lab_host="DH10B"
                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                     Mismatches:
Indels:
                                                                                                                                                 106 g 179 t
                                                                                                                                                                                                          Longth.
Matches:
                          /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                           US-09-026-459A-31 (1-874) x AL599633 (1-605)
                                          /db_xref-"taxon:9606"
Location/Qualiflers
1. .605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BE082846.1 CI:8473151
                                                                                                                                                                                                          2.79c 101
1037 00
                                                                                                                                                92 c
                                                                                                                                                                                                                                    Percent Similarity. 100.00%
Best Local Similarity: 100.00%
                                                                                                                                                                                                                                                                    23.028
                                                                                                                                                228 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BE082846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BE982816
                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421 Lys 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601 AAA 603
                                                                                                                                                                                                                                                                  Query Match:
               source
                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HE082846/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLITIMITATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                         Score:
                                                                                                                                                                                                          Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             급
```

```
This sequence was derived from the FAPESP/LICE Human Canner Genome Project. This entry can be seen in the following URL (http://www.lodwig.org.br/scrip*s/gotbtmi2_plor)=s*2-MC2-RF0642-210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zuble-"orden: breast; Vector: puelB; Site_1: Smal; Site_2: Smal; A mini-library was made by clothing products derived from thest BS PCR (U.S. Letters Patent application No.196, 716 Lindwig Institute for Cancer Research) profiles
                                                                                                                                                           Niqai,M.A., da Silva,W. Jr., Zaqo,M.A., Bordin,S., Cósta,F.F.,
Coldman, G.H., Carvalho,A.F., Matsukuma,A., Raia,G.S., Simpson,D.H.,
Brunstein,A., debliveira,P.S., Bucher,P., Jongeneel,C.V., O'Bare,
M.J., Soares,F., Brebfani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            into the pur 18 vector. Reverse transcription of tissue mKNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                         Verjovski Almeida, S., Briones, M.R.
                                               Homo Sapiens
Eukaryota: Metazoa: Chordata; Chanhala; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                          Ludwig Institute tor Canver Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                   Shotqun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  676 CACTECACIACIA COMMANAMONANITATACTGAGAAGGAGGAAGGATATAGGATACATC 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3/2 PhytyschatycPheAlatysAlaValGlychGlyCysValGlufleGlySerGlaArg 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92 TyrtysfæugtyValArdfæuTyrTyrArqValMetGluSerMetLeuLysSerGluGlu 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      412 CluardianSerfleGinashPheSerfyslanianashashilePheHisMetSer 431
                                                                                            Mammalla: Eutheria: Primates: Catarrhin; Hominidae: Homo.
                                                                                                                                                                                                                                                                                                                                Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lothers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   694
207
3
7
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /orqanism."Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US 09 026 459A 31 (1:874) x BE082846 (1-694)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         High quality sequence start: 58
High quality sequence stop: 669.

    (bases 1 to 694)
    Dias Neto, R., darcia Correa, R.,

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              200 014 e06&t4=2000-02-21&t4=1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:9506"
/elone_lib="BT0642"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: asimpson *ludwiq.org.br
                                                                                                                                                                                                                                                                                                                                                                                                      Laboratory of Cancer Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualiliers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  127 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seq primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Adov_stage. "Adult
                                                                                                                                                                                                                                                                                                                                                                             Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.966-100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1030.00
96.338
94.958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fax: +55 11 2704922
Fax: +55 11 2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22.878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16.94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   shel addambas
                                                                                                                                                                                                                                                               Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                         20202653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>-</u>-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                         human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        overy Match:
                                             DRCAN ISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HASE COUNT
                                                                                                                   REFERENCE
KEYWORDS
                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                  HUKNAL.
                                                                                                                                                                                                                                                                                                                                                         MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                             I.N.H.WWO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             XI CIX
                         3. MIK. E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -3
```

```
(bases 1 to 624)
Melton, D., Meadows, A., Clinton, S., Billier, L., Martal, M., Pape, D., Wylle, T., Martin, J., Elistain, A., Schmitt, A., Theising, H., Ritter B., E., Ronko, L., Mentett, J., Cardenas, M., Gibbons, M., Me'ann, R., Cole, R., Tsagaroishvili, R., Williams, T., Jackson, Y., and Howers, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 14 MAR 2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA sequencing by: Washington University Genome Sequencing Center For Information on obtaining a clone please contact: Juliana Brown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This sequence now available from the IMAGE consortium, for clone orders contact: into wimage. His gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
Eukaryota: Metazoa: Chordata: Craniata; Vertebrata; Enteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           iallb09.yl Human Pancreatic Islets Homo sapiens cDNA clone
IMAGE:5638049 5' similar to qb:M15400 REIINOHIASIOMA ASSOCIATED
PROTHIN (HUMAN); qb.M26791 Monse retinoblastoma susceptibility
protein (MOUSE);, mRNA sequence,
                                                                                                                                                                                                                                                                                                            472 PbeAspPbetyrtysValifeCluSerPbetfetysAlaCluClyAsnteufbrArgClu 491
                                                                                           452 LeuAspSerGlyThrAspLeuSerPheProTrp11efeuAshValleuAshLeuLysAla 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Douglas Melton, Klaus II. Kaestner, & Hiroshi Inone
                                                                                                                                                                                                                   432 LeuLeuAladysAlaLeuGluValValMetAlaThrTyrSerAruSerThrSerGluAsn
                                                                                                                                                                                                                                                                                 492 Met IleLysHisteneluArqCysGluHisArqTleMetGluSerLeuAlaTrpLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       532 LeuGlaSerAlaCysProLeuAsnLeu ProLeuGlnAsnAsnHisThrAlaAlaAspMe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia; Eutheria; Primates; Catarrhini; Bominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  551 tTyrLeuSerProValArgSerProLysLysLysGlySerThrThrArgVal +68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Libraries were constructed by Dr. Douglas Melton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="Human Pancreatic Islets"
/tissue_type="Islets of Langerhans"
/dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               m.k.nA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WashU-Barvard Pancreas EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: dmelton-biohp.harvard.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            High quality sequence stop: 430.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            624 hp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xret="taxon:9606"
/clone="IMAGE:5638049"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Endocrine Pancreas Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Seg primer: -40RP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (brown !tas.harvard.edu)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AW583181.1 GI:7260125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       617-495-1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fax: 617-495-8557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MA 02138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AW58 4181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     лишап.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOUFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCUS
                                            3
                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                             \frac{Q}{2}
                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                             ò
                                                                                                                                                                                      ें
```

```
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
/note-"Ordan: Pancreas, Vector: pSPORTI; Site_1: Not 1; Site_2: Sal 1; Library constructed using Supersoript Plasmid Tibrary yenterlogics) "MyA majr by plasmid Tibrary size-selected by column fractionation; oligo-df priming. Size-selected by column fractionation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             western incores marked by mRNA linear EST 27-JAN-1 NACE:1247665 5' similar to qb:M15400 RETINOHLASTOMA-ASSOCIATED PROTEIN (RUMAN), qb:M56391 Mouse retinoblastuma susciptibility protein (MoUSE), mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                             204 rPhenluThrdinArgThrProArq1y4SerAsnLeuAspGlyGlyValAsnValIloPr 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                44 3 FICAGCAAGIGARCATCAGAAAAICTGATTTOCTATTTAACAACTGAAAAGIGAA 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     475. e&tatysAlaVatGtyCtyCysVatGtut!eGTySerGtnArgryrtysteuGTyVa. 396.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     256 yteuproGluvalGluAsnLeuSerlysArgTyrCluGlu11eTyrLeuLysAsnLysAs 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12 t. acttecaeggetgaaatetteeaaaggatagaagaattataaaaataaaaa 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 243 FILLGAAACACAGAGAAAAAAAAAAAAAAAAAAGTITGATGAAGAGGGAAAAAGTIFFG 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         316 OPTOHISTARPROVALARGTBARGTBARDARTHILLOCINGLINGUMETHELLOLOUAS 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               346 nScrAlaScrAspGlnProScrGluAsnLeulleScrTyrPheAsnAsnCysThrValAs 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  356 nProlysaluserIleLeuLysArqValLysAspileGlyTyrIleFheLysGluLysFh 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           48 * TOSTANACIGICACASTAGGATICTGICGAAATITGAIGAGGAAIACAAAGITGAAGI 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              543 ICCCIIGIAFTACCGACTAAIGGAATCCATGCTTAAATCAGAAGAAGGATTATGCAT 602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  247 ValTyrPheLysAsnPhelleProPheMetAsn-SerLeuGlyLeuValThrSerAsnGl
                                                                                   average insert size 1.08 kb. Primary library, unamplified."
                                                                                                                                  1 others
                                                                                                                                                                                                                                                             Conservative:
Mismatches:
                                                                                                                               186 t
                                                                                                                                                                                                                                         Matches:
                                                                                                                                                                                                                       Length:
                                                                                                                                                                                                                                                                                                        indels:
                                                                                                                                                                                                                                                                                                                                                                      TS - 1 - 124 - 459A +1 (1-874) x AW583181 (1-623)
                                                                                                                             109 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA763485.1 GI:2813232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        416 eGlnAsnPheSerLysLeu 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 504 ICAAAATTITAGGAAACTI 621
                                                                                                                                                                                                                  5.4e-99
1016.00
                                                                                                                               93 6
                                                                                                                                                                                                                                                         98.078
97.108
22.568
                                                                                                                                                                                                                                                                               Host Local Similarity:
govery Match:
LB:
                                                                                                                                    ಇ
                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                              Alliquent Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                  Pred. No. :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA76 4485/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 14
                                                                                                                                                      N ...
                                                                                                                                                                                                                                           SCOFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ē
```

```
Anote "Vector, p1713b:Pas (Marmacia) with a modified polylinker, 1st strand cDNA was prepared from mammary gland dissue from a lactating female, and was then primed with a Not I = Oliqe(dT) primer. Double-stranded cDNA was ligated to Ecc PI adapters (Marmacia), digested with Not I and cloned into the Not I and Ecc RI sites of the modified p1713 vector. Therey is normalized. Library was constructed by cases and M. Fatima Horaldo. "
                                                                                                                                                                                                                                                                                                                    Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Steptoe,M., Tan,F., Underwood,K., Mnore,H., Steptoe,M., Tan,F., Underwood,K., Mnore,H., Willessing,B., Wylle,T., Lennon,G., Soares,B., Wilson,R. and Waterston,R.
                                                                                                                                                             P.A.O., 14, M. 1970, Charlata, Charlata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This clone is available royalty free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   584 POCTAGGADO FARAGGILGICIGOCCACCONTIVARAGAGAGGGOTICITAACGILGIGG 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           744 GCCCAICCGAAAAICIIGIIUCCIUCTIUCCAIAIIGICUGGIIAGCIICAAAGAAGAACAAIC 685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            381 lyGlnGlyCysValGluIleGlySerGlaArgTyrLycLeuGlyValArgTeuTyrTyrA 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               302 ThrProArgLysSerAsn--LeuAspGluGluValAsnVallleProProHisThrProV 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            860 AGPOPAAGGAAAAAAAAAGCCOTTGGGAGGGGCCAAAGGGGTTTACCCCCCACAI - - CCAG 804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          803 TIGG-GCCGTITITGATACTACICCACCAITAGGGGGGIITIIAAIIICCCCAAAIALA 745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (4) Long SyngVallysAspile() pTyrilePbelys() algebelys() algeben algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben () algeben ()
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           321 alArgThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAspw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   341 InProSerGluAsniculleSerTyrPheAsnAsnCysThrValAsnProLysGluSert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WashU HHMI Mouse ESI Project
Washington University School of MedicineP
4444 Forest Park Parkway, Hox 8501. St. Louis, Mr 53108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib "Scares_mammary_qland_NMLMG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seq primer: -28ml3 rev2 EI from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /sex-Temale (lactating)"
/tissuc_type-"mammary gland"
/lab_host-"DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1996)
Contact: Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ndels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism-"Mus musculus"
/db_xref-"taxon:10090"
/clone-"1MAGE:1247665"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-026-459A-31 (1-874) x AA763485 (1-871)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.9e-98
1013.00
                                                                                                                                                                                                                                                                           1 (bases 1 to 871)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80.348
74.488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12.498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .871
                                                          house mouse.
                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MG1:661353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    242 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pred. No.:
                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOURNAL
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
```

```
Homo sapiens
Enkaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC elone distribution information can be tound through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                         HITTITITI HELLE HELLELLE HELLE HELLE HELLELLE HELLE HE
624 GCCAGGGTGTGTGTTGAYAF 3GAGIACAGAAAAAAATTGGAATGGGAATGTATAAG 565
                                                                            401 rqVatMotGEuSorMotToottysSordToOttoArqLeuSortTeOTnAsseP668ett. 423
                                                                                                                                                                                                                                                                                                                                                                                                                          44) etAlathr1yrSerArgSerthrSerGInAsnLeuAspSerGlythrAspLeuSerPheP 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            521 InSert/ysAspArdClu/JyProthrAspHisLeuGluSerAlaCysProteuAsnLeuP 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     941 rotaudtaAsaAsaHisThrAlaAlaAspMotTyrFenSerPPoValArgSerPrGLysL 561
                                                                                                                                                                                                                                                        421 yetəntənAsnAspAsnTlePheHisMetSerLenLenAlaCysAlaLenGluValValM 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481 helleLysAladludlyAsuLeaThrArqdluMetILeLysHisLeuGluArqCysGluH 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               501 isArqII eMer GluSer LeuAlaTrpLeuSer AspSerProLeuIbeAspLeuIlleLysG 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        [64] ystysclyserthrthrarqValAsnSerthrAlaAsnAlaGluthrGluAlaThrSerA 581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cDNA Library Preparation: Lite Technologies, Inc., cDNA Library Arrayed by: the L.M.A.G.E. Consertium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mammalia: Entheria: Primates: Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      http://image.llnl.gov
Plate: LLAM10293 row: 1 column: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo_sapiens"
/db_xret="taxon.9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence stop: 633.
Location/Unalifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          l (bases 1 to 922)
NIH MGC http://mqc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: eqapbs ramail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               581 Tarbastnihrstniystroleutys 589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dissue Produtement, ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BG254544
BG2545431 GE12764459
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOUTHON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FELEREN'E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PESSILI 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14.37.14.44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -CAMMEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       50,00
                                                                                                                                                                  Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
```

```
Average insert size 1.7 kb. Library enriched for full-fleigh clones and constructed by Life Technologies. Note: this is a NH_MOC Library."
                                                                          /note="organ: live; Vector: pCMV Shok!: Site 1: Not1; Site_2: Sall: Cloned unidirectionally; oligo d1 primed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           704 rValPheMetClnArqLeufysThrAsnileteuGlnTyrAlaSerThrArqProProTh 724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    784 rPheGlyThrSerGluLysPheGlnLysTleAsnGlnMetValCysAsnSerAspArqVa 804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       804 TieulysArdSetAiaGludlySetAsnProProlysProLeuLysLysLeuArdPleAs B24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 824 piledludiyserAspoluAlaAsp-ClySerLysHis LeuProdiydluSerLysPhe 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              664 pleutysPholyslleIleValThrAluT,rL,sAsphonFroHisAlaValGludluTh 684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120 CCFTAAATFCAAAATCAT - GTAACAGCATAGAAGATCTTCCTCATGTTCAGAGAC 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              537 GCTCANANGANGTGCTGANGGANGCAN CCTCCTANANGCICANANACIACIACGCTTTGA 595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   596 PAPIGAAGGATCAGA1GAAGGAGAAAIGGAAGIAAAGAIGG1GC1GCPAGGAGGIGGAATG1 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ATCATCTGGACCCTTTTCCGACACACCCTGCAGAATGAGGTATGAACTCATGAGAGAG 60
                                                                                                                                                                                                                                                                                                                                                                                                                      625 | HetleTrpThricoPhestaBistbrioottaAstata Tyrata uM tAruAspAr
| HITTHIII HITTHIII HITTHIII HITTHIII HITTHIII HITTHIII HITTHIII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              644 gHisLeuAspGlnIleMetMetCysSerMetTyrGlylleCysLysValLysAsn1leAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          684 rPhetysArqVall.cutletysGluGluGluTyrAspscrttetteVsTPhetyrAsnSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       744 qilebrodiydiyAsniletyrileSerbrotentysSerbrotyitysTleSerdinGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  764 yleuProThrProThrLysMetThrProArgSerArg11eLenValSer11ledly61uSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          844 GlnGlnLysLeuAlaGluMet.ThrSerThrArqThrArqMetGluLysMetAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ztissac_type "adenovateinoma, eeli lune"
Zab_host="DH10B (phaqe-resistant)"
                                                                                                                                                                                                                                                                                       Conservative:
Mismatches:
                                                                                                                                                                                                                                                                     Matellies:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      864 AspSerMetAspThrSerAsnLysGluGluLys 874
                                                                                                                                                                                                                                                   Length:
                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /elone_lib-"NIH_MGC_90"
                                                                                                                                                                                                                                                                                                                                                                                  US-09:026-459A-31 (1:874) x BG253543 (1:922)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone-"IMAGE:4472611"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.940.97
                                                                                                                                                                                                                                                                     1004.00
                                                                                                                                                                                                                                                                                   90.51%
88.54%
                                                                                                                                                                                                                                                                                                                            $67.77
                                                                                                                                                                                                                                                                                                       Similarity:
                                                                                                                                                                         307
                                                                                                                                                                                                                                                                                   Percent Similarity:
                                                                                                                                                                                                                               Scores:
                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                     Best Local
                                                                                                                                                                     HASE COUNT
                                                                                                                                                                                                                                                 Pred. No.:
                                                                                                                                                                                                                               Aliqnment
                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <del>2</del>
                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                               급
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
```

716 GGAAGCIGGGIACCICCACACAGGAAAGAAAG 748

Search completed: January 19, 2003, 05:05:33 Job time : 1945.65 secs

Genfore Version 5.1 α Copyright (c) 1993 - 2003 Compugen Ltd.

nucleic search, using sw model M mucleuc

January 16, 2003, 15:20:22 ; Search time 2913:86 Seconds Run on:

(without alignments) 18469.506 Million cell updates/sec

US 09 926 459A 32 Perfort Score:

1 GOTALGATGGAGAAAGIIIG......AAAIGAGGAIIALIGALAGT 3323

Seyprenders

Gapop 10.0 , Sapext 1.0 IDENTITY_NUC Scoring table:

lotal number of hits satisfying chosen parameters:

16154066 seqs, 8097743476 residues

Maximum DB Seq length: Zoobooboog Minimum DB seq length: 0

Fost processing: Minimum Match 10% Maximum Match 190% Listing first 45 summaries

but abase :

* - ISH

4ss_hum:* *: 2:11 • Harring *: mortse me em_estpl:*
em_estro:*
em_hre:* em_esthum:* •m estin:∗ # 1 # 1 SO em estba:* db_est 2: * qb est5:* em estmu:∗ em_estov:* qb hte:* qb_estl:* * 188b 2. 2. Ē Ę. 4 ÷

Fred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution. om_qss_pro:• *:bol_ssp ma

488 of here.

em_qss_mus:*

em qss_tun:*

tss bin: *

Ę

: 117 SSP Me

Re-18 to 1.1		× 5.4.2				
ž	Score	Match	Match Length DB	ĭ	1.3	Description
_	910.2		1073		13 BM450631	BM450031 AGENCOURT
. 7	10.4	4.72			BM561683	BM561083 AGENCOURT
-	H.5.6			4	804 19221	BQ439221 AGENCOURT
4	H44.H		3. 3.3.	4	80220275	BQ220275 AGENCOURT
<u> </u>	8.24.6	H 47	_	Ξ	AK011246	
<u>.</u>	786	24.7	1901	_	BM475603	HM475603 AGENCOURT

Location/Qualitiers

1. .1023

Source

FEATURES

7 752.4 122.6 1122 11 HNG45881 9 725.4 21.8 727 12 HNG45881 9 725.4 21.8 727 12 HG501051 10 699.6 21.1 823 12 MG501051 11 698.2 21.0 792 9 AL59731 12 691.8 20.8 872 13 HM466194 13 691.8 20.8 872 13 HM466194 14 660.1 19.4 777 13 HM466194 15 643.6 19.4 777 13 HM264009 16 643.6 19.4 727 13 HM264009 17 642.2 19.4 691.1 12 HG51219 18 60.2 19.4 691.1 12 HG51219 18 60.2 19.4 691.1 12 HG51219 22 56.4 17.9 622 12 HG5963 23 56.4 17.9 622 12 HG5963 24 575.2 17.5 9 AL59764 25 56.4 17.9 622 12 HG5963 26 558 10.8 590 10 AW56279 27 575.2 17.5 580 9 AL59764 28 575.2 17.5 580 9 AL59764 29 56.4 17.9 622 12 HG5963 20 56.4 17.9 622 12 HG5963 21 56.4 17.9 622 12 HG5963 22 56.4 17.9 622 12 HG5963 23 56.4 17.9 622 12 HG5963 24 575.2 15.4 74 14 HG5168 25 66.4 17.9 679 10 AW56279 26 66.4 17.9 679 12 HG5963 27 66.4 14.5 679 13 HG5963 28 66.4 14.5 679 13 HG5697 28 66.4 14.5 679 13 HG5697 29 66.4 14.5 679 13 HG5697 20 66.4 14.3 734 14 HG5697 20 66.4 14.3 734 14 HG5697 20 66.4 14.3 734 14 HG5697 20 66.4 14.3 73 12 HG597 20 66.4 14.3 73 12 HG597 20 66.4 14.3 73 12 HG597 20 66.7 13.8 679 13 HG597 20 66.7 13.8 679 13 HG597 20 66.7 13 HG597 20 66.7 13 HG597 20 66.7 13 HG597 20 66.7 13 HG597 20 66.7 13 HG597 20 66.
7 752.4 1 22.6 1 11.2 2.6 1 11.2 2.6 2.6 1 11.2 2.6 2.6 1 11.2 2.6 2.6 2.1 1 22.6 2.1 1
2 4 4 4 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5
コニーニコニーことにはおけることにはまりますが、そうできます。 ロリーニコニーニコンにはることできます。 カック・ストル・カック・ストル・カック・ストル・カック・ストル・カック・ストル・カック・ストル・ストル・ストル・ストル・ストル・ストル・ストール・ストール・ストール・

AL. P. NMF.NTS

BM450031 1024 bp mkNA linear EST 05 FEB 2002 AGENCOURT_6393544 NIH_MGC_72 HOMO SAPOCES CONA CLONE IMAGE:5528037 Homo Sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1023)
NIH-MS http://mec.ncl.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MSC) DNA Sequencing by: Agenceurt Hosselence Corporation Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLML at: http://image.llml.gov. d.col.mm. 22 Flate: LLAMI2234 row. d.col.mm. 22 High quality sequence stop: 644. Lissue Procurement: ATCC/DCTD/DTP cDNA Library Preparation: Lile Technologies, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consentium (LLNL) Unpublished (1999) Contact: Kobert Strausberg, Ph.D. Email: cqapbs-r*mail.nih.qov BM450041.1 GI:18499071 5′, mKNA sequence. BM450031 human. DEFINITION ORGANISM TITLE JOUKNAL ACCESSION REFERENCE AUTHORS RESULT 1
BM450031 KEYWORDS VERSION COMMENT SOURCE COCOS

```
Zhote "Organ skin, Vietor pGMV SPORIG: Site_1 Noti:
Site_2: Sali: Cloned unidirectionally. Primer: Oligo dT.
Average insert size 2 kb. Library constructed by Life
Technologies."
                                                                                                                                                                                                                                                                                            1911 CAAAGISAAGAATATAGACCTTAAATTCAAAATCATTGTAACAGGATACAAGGATGC 1970
                                                                                                                                                                                                                                                                                                                                                                                                                                2031 TATAGTATICTATAACICGGTGT FGAGGGAGAGGAAAAGAATATTTGGGGGGAGG 2090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2091 TECCACTAGGGCCCCTACCTTACCTTAACCTTAACCTGAAATTCGAAGCCTTTTAAAGTTT 2150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2151 TCCTAGTTCACCTTACGSATICTGSSASSSACATCTATATTTCACCTGAAGACC 2210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2271 AGTATCAATTGGTGAATGATTGGGGAGTTGTGAGAAGTTGGAGAAATAAATGAGAYGGT 2330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2451 AGGAGAGTOCAAATTTCACCACAAACTGGCAGAAATGACTTGTAATTGAAAGAAGAATGA 2510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1971 ICATGCTGTTCAGGAGACATTCAAACGTGTTTTGAIGAAGAAGAGGAGAGTATGTTAT Z640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2391 GAAAAAQTAGGCTFTGATAFTGAAGGATCAGATGAAGCAGATGGAAGTAAAACATGTGCC 2450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2571 GAACCH GGHGAACACTGTGTAFACTCTGGATTPGATTPGTPGTCTCACACATGTAGTGTA - 2630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           263) TAACTIFCCCAGGTFGTFFFFATGCCACAFTFFAATATCTFFAGGFGTFFFFGTGAATAT 2696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2691 AAAATGIGCAGATGCAATTGTTT--GGGTGAIICCTAAGGCACIIGAAAIGIIAGICATF 2748
                                                                                                                                                                                                                                                                                                                                                                                                                                                 36.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421 ATGTAACAGCGACCTGTGTCTTCAAAAGAAGTGCTGAAAGGAACTAAGGTGCTGGTAAAGGAGT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6; Gaps
                                                                                                                                                                                                                                                                                                              DB 13; Length 1023;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         O, Mismatches 43, Indels
                                             /clone_lib="NIH_MGC_72"
/Lissue_type="melanolic melanoma"
/lab_host="DHIOR (phage-resistant)"
                                                                                                                                                                                                                         27.4%; score 910.2; DB 13 95.2%; Pred. No. 3.2e-165;
                                                                                                                                                                        281
/organism "Homo sapiens"
/db_wref="taxon-9606"
                              /elone "IMAGE.5528037"
                                                                                                                                                                      1.37 9
                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                          134 a
                                                                                                                                                                                                                                                        Matches 972;
                                                                                                                                                                                                                         Onery Match
                                                                                                                                                                                       N ISIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>2</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \hat{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \Gamma_{\mathbf{i}}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
```

```
/note="Organ: eye; Vertor: pNV-SPORIS: Site_1: Not1; Site_2: Sali; Cloned andirectionally. Primer: Sligs di. Average insert size 1.75 kb. Library constructed by Life Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                HST 20 FHB 2002
                                                                                                                                                                                                                                                                                                                                                                                                PMS61083 THE S66133 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:5550505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Enkarycia, Metassa, Chordata, Crasiata, Vertebrata, Euteleostomi,
Mammalia; Eutheria; Primates; Catarrhini, Hominidae; Homo.
                                                                                                                                                            1969 AAAGOTGTGGGGAAAAGTGGTGFCGAATFGAALTAGGATAGAAAGTGGAAGTGGAAGTTGGA 1128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1129 TTGTATTACCGAGTAATGGAATCCATGCTTAAATCAGAAGAAGAACGATTATCCATTCAA 1188
2749 GTTATTTATAGAGATTGAAAATGTTGTGTAAATGGTGGCATTTAAAAAGTTGTAGGAG 2808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cqapbs-remail.nih.gov
Tissue Procurement: Arroc
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by The L.M.A.S.E. Consortium (LLNL.)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MCC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                      901 FIGHTOCOSTOPPORTANAMATOCICIOCOTTALIBOATAGAAATGGCCCIA 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 1051)
NIH-MGC http://mgc nci nih gov/.
National Institutes of Health, Manmalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27.4%; Score 909.4; DB 13; Length 1051; 98.4%; Pred. No. 4.6e-165; tive 0; Mismatches 13; Indels 2;
                                                                            2809 IIOILE OSTSTEOVAANTAAARIUSTOLIA ESALAGIAAAAAAAAA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /cionc_lib="NiH_MGC_67"
/Lissue_type="retinoblastoma"
/lab_host="DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            299 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          http://image.liml.gov
Plate: LLAM12263 row: m column: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="IMAGE:5550905"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref "taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         197 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RM561083.1 GI:18806043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            221 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                            BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human.
                                                                                                                                                                                                                                                 2925 A 2925
                                                                                                                                                                                                                                                                                         1021 A 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hest Local
                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                      RESULT 2
RM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VEPSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                SILOCI
                                                                                                                                                                                                        Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ĝ
```

```
HO4/1922| HST 24-MAY-2002
ACHNOSHRI 7766562 NIH_MSC_92 HOMO SAPIONS CONA CLONE IMAGE:6015480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo Sapiens
Enkaryota, Metakoa, Chordata, Cianiala, Verlebiata, Entel<del>eos</del>tomi;
                                                                              1249 GAGGELGLAALGGCGACALAFAGAGAAGLAGAGAATGEGGAATLOFGGAAGAGAET 1308
                                                                                                                                                                                                                                                                                                                                                                                                                       1369. A INGRAAG FEFFA PAAAGCAGAAG GAAC HIGAGAAAGAAA TGAFAAAAGATTTAGAA 1428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       489 CITATIAAACAATCAAAGGACGGAGAAGGACCAACTGATCACCTTGAATCTGCTTGTCCT 1548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1549 CHIAAFTH COTOLCAGAATAALGACACAGAGAGATAIGTAFFH HELICHGTAAGA 1608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1609 TOTOCAAAGAAAAAAGGTTCAAGTACGGGGGTAAATTCDAGGGAAATGCAGAGAGAGAA 1668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 669 GCAACCIT/NGCCTTCCAGACCIAGAAGCATTGAAATCTACCTCTTTCACTGTTTAT 1728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1289 HAGGACHTAGAATTAGAAGAHATCATCTGGACGCHTHCGACGCACACGCHGCAGAATGAG 1848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1849 TATGAACTCATGAGAGACACAGGCATTTGGACCAAATTATGATGTGTTCCATGTATGGCATA 1908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1909 TGGAAAGGGAATALAGACGTFAA - ATFCAAAATGAFGAGAAGAGGATGATAGAAGGATGT 1967
                                                                                                                                                                                                                                                     1309 TEGEGETTECCOATGGATTGFGAATGGGTTAATTTAAAAGGGTTTGATTTTACAAAGGG 1358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14.29 COATGEGAADA FOGAATGATGATGGCEFFGCAFFGCAGGFFCAGAFFFAGCFFFFTAFFFGATE 1488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHTELLITELLE HITTELLE CONTROLLE CONT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661 AAAAAAJUSTATOSGOTAGOGTATOTOOGGOTAAATACACTTTGTGAACGCCTTCTGTCT 720
121 AATTITAGGAACTICTGAATGACAATTITITGATAGTGTGTGTGTGGGGGGGGGTGGGTGTT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421 PTIALLAAAPAALPAAAGGARRGAAGGACGAAPIGALGAGCTTGAATGTGCTTGTGCT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481 CITAALCITCCTCTCCAGAATAATCACACAGAGAATATGTATCTTTCTCCTGTAAGA 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Manualia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1081)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1968 TOPTICATOPTGLICAGGAGACATICAAACGTGT-FTTGATCAAAGAAGAAGAG 2019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HILLITTAL HILLITHILLITHILLIHIIII HILLIH HILLIHIIII 1983 953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cqapbs-remail.nih.qov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NIM MGC http://mgc.nei.nih.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NQ4 39221.1 GI:21178297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , mRNA sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RQ4 19221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         uman.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NEED IN LEGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        - KCAN1SM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KUYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HU4 19221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          I I E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S. HEY.E.
                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                       \stackrel{>}{\sim}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ĩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <del>-</del>2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \stackrel{\sim}{\supset}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              :\
_3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ã
```

COMMENT

```
2425 GAAGGAGAAGAAAGTAAACATCTCCCAAGAGTCCAAATTTCAGCAGAAACTGGCAGAA 2484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2605 CATTGTCTCTCACACATGTGACTGTATAACTTTCCCAGGTTCTGTTTATGGCCACATTTA 2664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2725 AAGCCACTTGAAATGTTAGTCATTGTTATTATACAAGATTGAAAATGTTGTGTAAAATGC 2784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2905 IGCCTICITITGIAGCAIATAGGIGAIGITIGGIGIIIIIAAIIAAIIIAIAAAA 2964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3025 TTPGATTGACTGCCATTCACCAAAFTALPCTGAACTCTTCTGCAAAAATGTAL 3084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 ATATCTTCAGCTCTTTTTGTGGGATATAAAATGTGCAGAATGGTTTTGGTGATTCCT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481 TGCCTFCTFTFGTAGCALATAGGTGTTTGCTFGTTTTTATTAATTTATATGTATA
             eDNA Library Preparation: Life Technologies, Inc., cDNA Library Arrayed by: The L.M.A.C.E. Consortion (LENN.) bunA Sequencing by: Agenciant Bioscience Colporation Clone distribution: MGC clone distribution, intormation can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GAAGCAGATGGAAGTAAACATCTCCCAGAGAAGTCCAAATTTCAGAAAAACTGGACAGAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2545 AACAAGGAAGAAATGAGGATGTCAGGACCTTGGTGGACACTGTGTACACTTTGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2785 TGCCATITAAAAAGITGIAGCAGAITGITGCITCTICCAAAGTAAAAITGVIGTGYTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 CATTGTCTCTCACAGATGTGTATAACTTTCCCAGGTTCTGTTATGCCACATTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2665 APATCTTCAGGTGTTTTTGTGGATATAAAATGTGCAGATGCAALTCTTTGGGTGALTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25.8%; Score 856; DB 14; Length 1081; 99.1%; Pred, No. 8.7e-155; tive 0; Mismatches 5; Indels 4
                                                                                  found through the L.M.A.G.E. Consortium/(LNN. at: http://image.llnl.gov
Plate: LLAMI3211 row: k column: 01
                                                                                                                                                                                              /ordanism-"Homo sapiens"
                                                                                                                                        High quality sequence stop: 742.
                                                                                                                                                                                                           /db_xret-"taxon:9606"
/clone-"IMAGE:6015480"
                                                                                                                                                            Location/Qualitiers
Lissue Procurement: AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 99.19
Matches 892; Conservative
                                                                                                                                                                           1081
                                                                                                                                                                                                                                                                                                                                                                                              T
                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                               Source
                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ^{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ៊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
```

```
10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OPGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOTTPNAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AK011246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RONDON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1,000
                                                           á
                                                                                                                                            ó
                                                                                                                                                                                셤
                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                              90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ٥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ें
                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                  H022:275
AGEN/OURT_7572621 NIH_MGC_92 Home sapiens chuA chose IMAGE-6044522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone_lib="NiH_MGC_92"
/Lissue_lype="embryonal carcinoma, cell line"
/lab_bost="bH10B (phage-resistant)"
/note="corpus testis: Vector: pCMV SPORT6; Site_1: Not1;
Site_2: Sall; Cloned unidirectionally; oligo-dr primed.
Average insert sice 2.5 Kb. Library enriched for full-length clones and constructed by tife Technologies.
full-length clones and constructed by tife Technologies.
Note: this is a NH_MGC Library "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3205 AGIATAAYCATAIGATACIAICATACIACIGAAACAGAITICATACCICAGAAIGIAAAA 3264
                                                                                                                                                                                                                                          325 GAACTTACTGATTALTTTCTTCGAACTTATGTTTTTAAATGA-GGATTATTGATAGT 3323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA Library Preparation: Life Technologies, inc. CDNA Library Arrayed by. The L.M.A.G. E. Consortium (ILNL) DNA Sequencing by: Apparough Biosociance Gosporation Counce distribution, Mar. clone distribution, Mar. clone distribution in Mar. clone distribution in the L.M.A.G.E. Consortium/LLNL at:
                                      6-61 TAGAAATTAG - AAAAAATTACTAATTTTACACATTAGATTTTATTTTACTATTGGAATCT 719
                                                                                               838 GAACTIACIGATIATITICITICALCAACTIATGITITIAAIGAGGGAITATIGAIAGI 898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  455 IIAAACICICACCICCCAIGIIGCICAAAGAACCAIAIAAAAACAGCIGIIAIAACATIA 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 881)
NIH MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      495 AAATGGAAAGATGATCTGGGTGATTTCAGTTAATGCTATGTGTGTCCTTGACTATTTTA 454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 515 ATGG11PACCTCGAACACCAQQCGAGGTGAGAACAGGAGTGCACGGATAGGAAAACAAC 574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryvia Metazen, Chardata, Chanjata, Vertebrata, Eutele
Mammalia: Eutheria: Primates: Catarrhini; Hominidae: Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25.4%; Score 844.8; DB 14; Length 881;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .3c 352,
les 7, Indels
                                                                                                                                                                                                                                                                 _
_
_
_
_
_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                http://image-linl.gov
Plate: LLAM13287 row: e_column: 03
High quality sequence stop: 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D.
Email: cqapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Prod. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone="IMAGE:6044522"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             lissue Procurement: AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HQ220275.1 G1:20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99.08;
                                                                                                                                                                                                                                                                 Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                        5', mRNA sequence.
BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 871;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cuery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Host Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sonre
                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MASE LAINT
                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESS FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOHNRAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KILLER NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                            RESOL: 4
By 220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATORES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HISIN
                                                                                                                                                                                                 43
                                                                                Š
```

```
linear HIC 19-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia, Eptheria, Pedestia, Schuregnathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus masculus 10 days embryo whole body cDNA, RIKEN full-length opriched library, clone 2600017M22 reliech: 33/oma 1, 1ull insert.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1175 GATTATCCAFFCAAAATFITAGCAAACTFCTGAATGACAACA-TTFFFCAFAFGF-7-11 1232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          995 GCAGAGTGAATGCAAAAAAAAAAAAAAAAAGTTALACTGAAAGAGTATAGGATACALGTITA 1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1055 AAGAGAAATTTGGTTAAAGGTGTGTGGGACAGGGTTGTGTGGAATTTGGATGACAGGGGTACA 1114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1115 AACTTGGAGTTCGCTATTGGTGAGTAATGGAATCCATGCTTAAATCAGAAGAAGAAG 1174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    781 GATIAICCAITCAAAATITIAGCAAACTICIGAATGACCACAITITITGAIA1G1CCLI1 840
                                                                                                                                                                                                                                                   541 TGATTTTBAATTCACCAAGTGATCAACCLICAGAAAICIGATTICCIATILAACAACL 600
575 TAGAAAATGATACAAGAATTATTGAAGTTCTCTGTGTAAAGAACATGAATGTAATATAGATG 634
                                                                                                                                                                                                                                                                                                                                                                                                                                 635 ACCTGAAAAATGTTTATTTTCAAAAATTTTATACCTTTTTATGAATTCTTTGGACTTGTAA 694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    695 CATICTAATGGACTTTCCAGAGGTTGAAAATCTTTCTAAACGATACGAAGAAATTTATGTTA 754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301 CATCTAATGGACTTCCAGAGGTTGAAAATCTTTCTAAACGALACGAAGAALLLALGTTA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           755 AAAATAAAGATCTAGATGCAAGAITATTTTTGGATCATGATAAAACTCTTCAGACTGATT 814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         815 CTATACACACTTTTGAAACACAGAGAAAAGGAAAAGTAAAGCTTGA FGAAGAGGTGA 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                875 ATGTAATTTCTTCTACACACTTCCAGTTAGGAGTGTTATGAACACTATCCAACAATTAATGA 934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus masculus (strain.CSTBL/CS) 10 days embryo (DHA to mRNA) elemeliberKEN full thempth emriched mouse opna library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       935 TARTITAAATICAAAVAATAADOLICAAAAATCIGAITICGTAITITAACAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1233 ATTGGGGTGGGGTGTTGAGGTTGTAATGGGGAGATATAGG 1272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HELLITHTITTE THE SATE AND ACCOUNT HELLITHTITTE BROWN AND ACCOUNT HIGH ALL GOOGLOCKET HIGH GAST HIGH ALL GOOGLOCKET HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST HIGH GAST H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IIIENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High-efficiency full-length cDNA cloning
Meth Enzymol. 303, 19-44 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1364 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Carninci, P. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:12847243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AK011246.1 GF:128
HTC; CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         clone:2600017M22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sednence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AE011246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AK011246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99279253
```

```
0; Mismatches 109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 824.6; DB 11;
Pred. No. 9.5e 149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /strain="C578L/6J"
/db_xrct="FANTOM_DB:2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        346 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /dev_stage="10 days embryo"
1. .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xrel="MGD:MGI:1905260"
/db_xrel="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref_"G1:12847244"
/db_xret="MGD:MG1:97874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /protein_id="BAB2749+.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone-"2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               307 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NLISYFNNCTVNP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /codon_start-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   evidence: 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Match
Local Similarity 89.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /dene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /qene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 890; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                          .1364
                                                                                                                                                                                                                                                                                                                                                 Host: SolR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Mateb
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                       Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>а</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                os Adamas, L. Adamas, Akahira, S., Akimura, T., Aono, H., Arai, A., Arakwa, F., Haldarelli, R., Hono, H., Brownstein, M., Hult, C., Arakwa, F., Haldarelli, R., Hono, H., Brownstein, M., Halt, C., Hult, C., Hardara, Hardara, Hardara, Hardara, Hardara, Hardara, Hardara, Hardara, Hardara, Hardara, Hardara, T., Horri, F., Hume, D., Imotani, R., Ishli, D., Hormo, H., Kouda, M., Kasukawa, T., Kato, H., Rawai, J., Kojima, Y., Kono, H., Kouda, M., Koya, S., Kurihara, C., Marsuyama, T., Miyazaki, A., Nishi, R., Nomara, R., Numazaki, R., Owa, C., Ouackenbush, J., Saito, H., Saito, R., Sakai, R., Sano, H., Sasaki, D., Saito, H., Sasaki, D., Saito, H., Sasaki, D., Saito, H., Salto, R., Shibata, K., Shibata, Y., Shinaqawa, A., Shiraki, T., Suqabe, Y., Suzuki, H., Taqami, M., Taqawa, A., Takahashi, F., Tahaka, T., Tejima, Y., Toya, T., Yamanaka, J., Yamanaka, J., Yashida, K., Yoshida, K., Yoshida, K., Yoshido, M., Muramatsu, M., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kawai, J., Shihaqawa, A., Shibata, K., Yoshino, M., Itch, M., Ishii, Y., Atakawa, I., Hara, A., Eukunish, Y., Konno, H., Adachi, J., Fukuda, S., Atakawa, K., Isada, M., Nishi, K., Kiyosawa, H., Kondo, S., Yamanaka, I., Saito, I., Charaka, K., Saito, H., Washkawa, T., Saito, R., Saito, R., Saito, K., Matsuda, H., Ashburner, M., Batalov, S., Casavani, T., Fleischmann, W., Gaasterland, T., Gissi, C., Kind, B., Kochiwa, H., Kuehl, P., Lewis, S., Matsuo, Y., Nikaidov, I., Pesole, G., Wagner, L., Washio, T., Sakai, K., Okido, T., Furuno, M., Aono, H., Haldarelli, R., Harsh, G., Hake, J., Hoffelli, D., Hojunga, N., Carninci, P., de Bonaldo, M.F., Brownstein, M.J., Bull, G., Hill, D., Holmmin, M., Hume, D.A., Kamiya, M., Lee, N.H., Lyons, P., Hill, D., Mannan, M., Hume, D.A., Kamiya, M., Lee, N.H., Lyons, P., Hill, D., M., Mannan, M., Hume, D.A., Kamiya, M., Lee, N.H., Lyons, P., Hill, D., M., Mannan, M., Mannan, M., Ramiya, M., Lee, N.H., Lyons, P., Mannan, M., Mannan, M., Ramiya, M., Lee, N.H., Lyons, P., Hill, D., M., Mannan, M., Mannan, M., Ramiya, M., Lee, N.H., Lyons, P., Mannan, M.,                                Carminel, P., Shibata, Y., Hayatsu, N., Suqahara, Y., Shibata, K., Itoh, M., Konto, H., ekazaki, Y., Muramalsu, M., and Hayashizaki, Y. Normalization and subtraction of captrapper selected cDNAs to prepare 1011 leadth cDNA libraries for rapid discovery of new genes Geneme Res. 10 (10), 1617-1640 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Marchionni, L., Mashima, J., Mazzarelli, J., Mombavrts, P., Nordone, P., Rinq, R., Rinqwald, M., Rodriguez, L., Sakamoto, N., Sasaki, H., Storo, K., Schombach, C., Seya, T., Shibata, Y., Storch, K.F., Suzuki, H.; Tayoroka, K., Wanq, K.H., Weitz, C., Whillaker, C., Wilming, L., Wyushaw Boris, A., Yoshida, K., Haseqawa, Y., Kawaji, H., Kohtsuki, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Exploration Research Group, RIKEN Genomic Sciences Center (GSC), PIKEN Vokohama Institute; i 7 22 Sachito cho, icatumi ka, Yokohama, Aranarawa 2 10-0045, Japan (E-mail:genome-resease:iken.go.jp, UKLAHIPP//GENOME-38-17Ken.go.jp/, ICH:81 45 503 9222, Exx:81-45-503 9216)
                                                                                                                                                                                                                                                                                                                                                                       Shibota,K., Itob,M., Aizawa,K., Napazaka,S., Sasaki,N., Carminel,P., Sumro,H., Akiyama,J., Nishi,K., Kitsumai,T., Fashiro,H., Itob,M., Sumi,N., Ishii,Y., Nakamuta,S., Hazama,M., Nishino-T., Harada,A., Yamin,N., Shii,Y., Nakamuta,S., Hazama,M., Nishino-T., Harada,A., Yamidmoto,R., Inouro, K., Iroqawa,Y., Izawa,M., Ohara,E., Watahiki,M., Youeda,Y., Ishkawa,T., Ozawa,K., Tanaka,T., Maisuura,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Bayashizaki,Y. Rikki,M., Shiinota, S., Kawai,J., Skazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Bayashizaki,Y. Rikki, Intouring pipeline analysis (PISA) system--044-format sequencer formaters. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Penter and Genome Science Laboratory in RIKEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submiffed (10-JUL 2000) Yoshihide Hayashizaki, The Institute of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Please visit our web site (http://qenome qsc riken qo )p/) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Physical and Chemical Research (RIKEN), Laboratory for Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-699 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDNA library was prepared and sequenced in Mouse Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5 (bases 1 to 1464)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11601502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21085660
                                                                                                                                                                                                                                            20499374
                                                                                                                                                                                                                                                                                               11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11217851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOTAL
                                         AUTHORS
I NIKITE
                                                                                                                                                                                                                                                                                               DI BAMED
                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOHNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MELLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KELEKEN.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                             DOURNAL.
                                                                                                                                                                                                                                                      MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FURNAL
                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
```

```
prepared by using trehalose thermo activated reverse transcriptuse and subsequently enriched for full length by cap trapper. Second strand cUNA was prepared with the primer adopter of sequence [5] GAGAGAGARITGICAMCTRAPHAAILAMATHORD (COCCECPCPC) 4.1, eDMA was cheaved with Xhol and Sstl. Cloning sites, 5, end: Xhol; 4, end: Sstl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YETRESPPALLIGEZYKTAALD INSSPRIFIGEGENESAE TANGLEND FLIEVLENEHE
CNIDEVKNYYFKNETPETNSLG IVSSNOLDEWESLSKRYEEVYLKNKOLDARLJELDHO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="RIKEN full-length enriched mouse conA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KTLQTOP LOSFETERL PRKNNPDEEANVVTPHTPVRTVMN1 LQLLMV LLNSASDQPSE
Division of Experimental Animal Research in Riken contributed to
prepare mouse tissues. First strand cDNA was primed with a primer
[5] GAGAGAGAAGATCCAAGAGTETTTTTTTTTTTTTTVW C], cDNA was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HITTELLEHTITEL TITTELLEH TET TET TITTELLEHTETETAAAAAAAACAACT 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             666 CAGTGCGTTATCTACTGAAATAAATTCTATGTTGGTGAAAAAAATTTCTTGGAATTTT 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELL TELLETTEL TELLETTEL TELLETTEL TELLET TELLET TELLETTELL THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69 GTGGGGAATCTGTATCTTTATTGCAGGGTTGACCTAGAGATGTCGTTCACTTTTAC 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 129 TGAGGTACAGAAAACATAGAAATCAGTGTGTATAAATTGTTTTAAGTTACTAAAAAAA 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       546 CGATACCAGTACCAAGGTTGATAATGCTA FGTGAAGACTATTGAAGAAGTATAGTGTT 605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           309 CAGTHCGATATCTACTGAAATAAATHGTGCATHGGTGAAAAGTHGTGGAGAGAH 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   O; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       486 TGAGCTACAGAAAAGCATAGAAACCAGTGTCTATAAATTCTTTGACTTATTAAAAGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 11; Length 1364;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note: "data source:MGD, source key:MGD:97874.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 of hers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
```

```
mRNA linear EST 05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGENCOORT_6480307 MIH_MGC_92 Homo sapiens obna clone IMAGE:5575683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryola, Metazoa, Chordata, Craniata, Vertebrata, Buteleostoml,
Mammalia: Butheria, Frimates, Catarhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1986 TAAACGCTATGAAGAAGTTTATCTTAAAAACAAAGATTTAGATGGAAGACTGTTTTGGA 1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           966 TAAAGAAAAATTITATATATATAGAGGTGAAAAAGTTTATITGAAAAATTITATGGG 102%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1266 FATGAATACTAFFCAACAAFFAAGGGGGATTTFAAATFCFGCAAGFGATCAGCCAFCAGA 1325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by Agencent Bioscience Corporation
Clone distribution: MGC clone distribution information can be
tund through the I.M.A.G.E. Consortium/L.N. at:
http://mage.lln.gov
Plate: LLAM12326 row: f column: 04
                                                HILL HILL HILL HILLHHILLH HILLHHILLH HILLHHILL HILLHHILLH HILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILLHHILH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         229 IAAAAGGAIAGGAAAAATTTATCTTAAAAATAAAAGATCTAGATGGAAGATTATTTTGGA 788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 789 ICATGATAAAACIGTTCAGACTGATFGTATAGAGAGTTTTTGAAAGAGAGAGAGAGAGG 848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             469 TATGAN NYTATOYANATTAATGATGATGATTATAAATTYAGYAAGAGATGATGAGA 968
                                                                                                                                                                                                        489 ATATAAAAGAGOTGTTATAOOOATTAATGGTTOAOOTGGAADAOOOAGGGGGGGAA 548
                                                                                                                                                                                                                                                                                                                                                                                                                549 CAGGAGIGCACGGATAGCAAAACAATAGAAAATGATACAAGAATTATTGAAGTTCTCTC 608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            306 CAGGAGGGICGGATAGGAAAAAAAAFAATGATAGGAGGATTATGGAGGTTGTG 965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KUS TAAAQAAQAFGAAFGTAATATASAFGAGGTGAAAAATGITTATTTIGAAAAATTTATAGG 668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      869 IIITAIGAAITGIGIYGGAATIGIAAAAYAFGGAATTGGAAGGILGAAAATATYY 728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          845 AAAAAGIAACCTIGATGAAGAGGGGAATGTAATTCTTCACACACTCCAGGTTAGGAGTGT 908
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                   CONA Library Proparation: Life Technologies, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     969 AAATCTCATTTTCTTATTTTAACAACTGCACAGTGAATCC 1007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1001 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence start: 17
High quality sequence stop: 734.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NIH-MGC http://mgc nci nih gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-r@mail.nih.gov
lissue Procurement: AFCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HM475603.1 GI:18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5', mRNA sequence.
BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Home sapiess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OF: ANICH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HLS711 5
HM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOTTENAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KITYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S.JIR.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                L. MIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
```

/organism-"Homo sapiens"

Location/Qualifiers

.1001.

Somice

FEATURES

```
~;
                                                                                                                                                                      /tissue_type="embryonal carcinoma, cell line"
//lab.host."DB10B (phage=resistant)"
//math.host."DB10B (phage=resistant)"
//math.gram.tostis: Vector: pGPW-SPOR16; Site_1: Not1;
Site_2: Sall, Cloned unidirectionally; oligo-dl primed.
Average insert sire 2.5 kb. Library enriched for full-length clones and constructed by Life Technologies.
Inll:Length clones and constructed by Life Technologies.
Note: this is a NH_MSC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            962 CITCAGAAAACIGATII --CCIAIIIIAACAACIGGACAGIGAATGCAAAAGAAGTAI 1019
| 1111 | 1114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    183 AGAAATTGATAGGAGTAGGAAAGTTGATAA1OGTATG1CAAGAGTG1TGAAGAGIA10A 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43 ACTAATTGATACCAGTACCAAAGTTGATAATGGTATGTGAAGAGTGTTGAAGAAGTALOA 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   243 TGTATTGTTTTGCACTCTTCAGCAAATT-GGAAAGGACAIGTGAACTTATATATTTGACAC 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                103 EGTATTGETFGEFFGEFFGEAAATFGGGAAAGGAZAGGTGAAGTFATALFIGAGAG 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    302 AAGGCAGCAGTTGGATATGTAGTGAAATAAATTGTGGATTGGTGCTAAAAGTTTGTTGGA 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         283 TTCAGTTAATGGTATGTGTTGGTTTTATTAAAGTGTGAGGTGGGGGTGTTGGTGA 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            482 AAGAACCATATAAAACAGCTGTTATACCCATTAATGGTTCACCTGGAACACCGAGGGGGG 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          343 AAGAACCATATAAAACAGTGTTATAACCCATAATGGTTCACCCCGAACACCCAGGCGAG 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          542 GTCAGAACAGGAGTGCACGGATAGGAAAGAAGTAGAAAATGATAGAAGAALLATLGAAG 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 403 GTGAGAAGAGGAGTGCACGGATAGCAAAACAACTAGAAAATGATACAAGAATTATTGAAG 452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           703 CACCACACANAAAAAGIAACCIIGAIGAACAAGIGAAIGIAAIICCICCACACACICCACIII 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     902 GGACTICTTATGAACACTATGCAACAATTAATGATGTTTTTAAATTCAGCAAGTGATCAAC 961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               422 TICAGITAAISCIAIGIGICCIIGACIAIIIIAIIAAACICICACICCCAIGTIGCICA 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       602 TTCTCTGTAAAGAACALGAAIGTAATATAGATGAGGTGAAAAAATGTTTATTTCAAAAATT 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  523 TIATACTITIAIGAATICTCTGGACTIGIAACAICIAATGGACTICCAGAAGTIGAAA 582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                583 АРСИЧИСИВАВАСБАРАСВАСВАСВАСТИТЕВ В 100 В 100 В 100 В 100 В 100 В 100 В 100 В 100 В 100 В 100 В 100 В 100 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          782 ITTIGGAICAIGATAAAACICIICAGACIGAIICIAIAGACAGIIITGAAAACACAGAAA 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              842 PAPPAPPAAAAAAAQTAAQQTTGAAGAGGTGAATTGATTGCTCCACACACACTCAGTTA 901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               662 PPAPAGOPPTTATGAATTGTGTTGGAGTTGTAAGATGTAAFGGAGTTGCAGAGGTFGAAA 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  722 ATCTTTCTAAACGATACGAAGAATTEATCTTAAAAATAAAGATCTAGATGCAAGATTAT 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        362 TGACATTTTATTAGGTAAAGGGGAAGTATTACAAATGGAAGAGGTGGTGG13GA111GA1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25.7%; Scorc 786; DB 13; Longth 1801; Charity 95.1%; Pred. No. 2.6e-141; Chasariatie 7, Mishalokes 45; Indels 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib-"NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref-"taxon:9606"
/clone="!MAGE:5575683"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         833,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     M3' - has
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ڄ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          č
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
```

```
49 yo. Library is oligo-dr primed and directionally cloned (EcoRV sile is destroyed upon cloning). Average insert size 2.1 kb, insert size range 1.3.5 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 036.
                                                                                                                                                                     Uncar EST 20 FUB 2002
                                                                                                                                                                                          AGENCOURT 6505183 NIH_MGC_125 Homo sapiens cONA clone IMAGE:5588245-57, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="NHLMSC_125"
/lab_host="DH10B"
//ante="iorgan: overty" (pool of 3); Vector: pCMV-SPORT6;
Site_l: ProbW (destroyed): Site_2: Net1; RNA source pool of three overles, from females langing in age from 38 to
                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia: Eutheria: Primates: Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.350 CTPAAAAAAGIGCTGAAGGAAGCCTGCTAAACGGCGAAAAAAGTAGGCTTTGAT 2409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2410 AFTGAAGGAFCAGATGAAGCAGAAGGAAAGTAAAGATCTCCCAGGAGAGTCCAAAATTTCAG 2469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40 TIGITAGA TTO GASAAARITOCASAAAAATAAATCAGATATGTAAGAACGGACCGTGTG 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Clone distribution: MGC clone distribution information can be tound through the L.M.A.G.E. Consortium/LLNL at: http://madc.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     400 CTCAAAAAAAAAGTGGTGAAAGAAAGCAACGCTCGTAAAACGAATGAAAAAACTAGGCTTTGAT 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360 ALEGAGGALCAGALGAAGEAGALGGAGIAAAGALGEGGGGGGGGGGGAAATLEGAG 419
                                                                                                                                                                                                                                                                                                                                                                                                                                        NIH MOX; http://mgc.nci.nih.gov/.
National institutes of Health, Mammalian Gene Collection (MSC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDNA Library Preparation: Lite Technologies, Inc. CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22.6%; Score 752.4; EB 14; Length 1122; 96.6%; Pred; No. 7.70-135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA Sequencing by: Agencourt Bioscience Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3.2
                                                                                                                                                                        HENA
BB3 TATACCGGAAAAGAAGGGTAAGGAATATATAGGAATAA 918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               159 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plate: LLAMI2359 row: a column: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Robert Strausberg, Ph.D. Email: cqapbs-ramail.nih.qov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 High quality sequence start: 48
High quality sequence stop: 773,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zetone *IMAGE;5588245*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.
                                                                                                                                                                        da 2711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  lissue Procurement: Invitrogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db xret "taxon;9666"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               216 q
                                                                                                                                                                                                                                                                  HM545881.1 01:18778365
                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 1122)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .1122
                                                                                                                                                                                                                                                                                                                                                Homes sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                     RM545881
                                                                                                                                                                                                                                              RMS45881
                                                                                                                                                                                                                                                                                                                      human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    query Match
Bost Local 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Source
                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RASE FOUNT
                                                                                                                                                                                                                                           ATTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                      ELEKTRALE
                                                                                                                                                                                                                                                                VERSTON
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOHNSON I.
                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                           HM545HH1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MAH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NICE SE
                                                                                                                                                                                                                                                                                                                      子を目を
                                                                                                                                                                     S0. 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   â
  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
```

```
EST 14-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST (Poustka,A., Wellenreuther,R., Mewes,H.W., Weil,B. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Poustka, A., Wellenreuther, R., Mewes, B.W., Weil, B. and Wiemann, S.).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutberia; Primates; Cataribini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Heidelberg/Germany) within the cDNA sequencing consortium of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This is the 5' sequence of the clone insert close from 8 Wlemmann, Molecular Genome Analysis, German Cancer Persarch Center (PREZ): Email s.wiemann.skbr. heidelberg.de; sequenced by DKFZ (German Cancer Research Center)
                                                                                                                                                                                                                                                                                                                                                                                              2830 AATTIGOTOTOTOTOTOTOTACTAACAATGGCCCI ACACTGCGGGGCTTTGATAAPPOAGG 2889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2644
                                                                                                                                                                                                                               2710 GTTTGGGTGATFCCTAAGCCACTTGAAATGTTAGTCATTGTTATATTTAAAATTGAAA 2769
                                                                                                                                                                                                                                                                                                              2770 ATCHEGTSTAAATSCHASSCATHIAAAASHSTAASASAHSHHHHHHHHHHHHHHHHHHH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2950 IAATITATA-TGTATATITITITAATITAAGATGAA-GAGCCITAGAAAATGTGTGTGTGTA +006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3007 TOTATIONTICCAAATGGAATTIGATTIGACTIGGCCATTOACPAAAATTATCTGAACTOTTG 3066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2650 TTATGGCCACATTAATAICTTCAGCTTTITTTTGGAIAIAAAAIGIGCAGAAGIL 2709
                                                                                                                                                                                                                                                     780 AATTGCTGTGCTTTATGGATAGTAAAAATGGCCCTAGAGTGGGAGTCCTGATAACCGAGG 839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        600 ITAIGGCCAGAIITAAIAICTICAGGICITITIGGGAIAIAAAATGIGGAGAIGGAATI 659
                   480 AGCATGGATACCTCAAACAAGGAAGAAATGAGGATCTCAGGACCTTGGTGGACACTGT 519
                                                                               727 bp mkNA linear EST 14-AUG DKFZp31300816_r1 313 (synonym: hlec2) Homo sapiens cDNA clone ALS97811
                                                             2590 GTACACCTCTGGATTCATTGTCTCTCTCAGATGTGACTGTATAACTTTCCCAGGTTCTGT
Max-Planck-Institute for Molecular Genetics
Thomstrasse 74, 14195 Berlin, Germany
Tel: 49-30-84131623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: poustkaampimg-berlin dahlem.mpq.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3126 IATITIACTATIGGAAICTGAIATA 3150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1078 TALITITACTATICAAAAACGGAATA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AL597811.1 GI:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Pousika A.J.
Department Lehrach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fax: (49-30 84131128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This is the 5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>e</u>
                                                             ŝ
                                                                                                     <u>a</u>
                                                                                                                                             ंः
                                                                                                                                                                                     â
                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                      <u>a</u>
                                                                                                                                                                                                                                                                                                                ៊
                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               â
```

```
0
                                                                                                                                                                                                              Ande-"Vector, priplex2, site_1, slin, site_2, sfilb, cona-collection"
           No sl sequence available.
This clone (DKRYD31309BT) is available at the EXED in Berlin.
Please contert the Perper Bessourecentium, Heutmerweg 6, 14059
Berlin-Charlottenburg, GERMANY; Fmail: clonedarpd de.
                                                                                                                                                                                                                                                                                                                                                                                   1701 GAAATOTACCICICITICACIGHTTTAPAAAAAGIGTAIGGCTAACCTAHCHCCGCCT 1750
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1821 CCTITICCAMPAGACCTGPAGAATMAGTATMAACLCATGAGAGAGAGACATTTGGACCA 1880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HB1 AATFAFGAFGTFCCATGTATGGCAFAFGCAAAGFGAAGATAFAGACCCFFAAAFFCAA 1940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1441 AAICALLOLAACACAGATACAAGGATCTTCATGTGTGTGTGGGGAGAGATTGAAAGGTGT 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2181 GAACATOTATATITCACCCCIGAAGAGTCCATATAAAATTTGAGAAGGTOTGOCAAAAA 2240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2361 IGCTGAAGGAAGCAACCTCTAAAACACTGAAAAAATAAGGCTTTGAATATTGAAGGATC 2420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2951 GAGACTGAAAAGAAATATTTTGCAGTATGCTTTGCAGGAGGGGGGGTTTTTGTGAGAAT 2120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             224] AACAAAAFGACTCCAAGACCACAAGAATCTTAGTATGAATGGTGAATGATTGGGGGGGTTG 2300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (0) HIFGALCAAAGAAGAGGAGTATGATTATAATAGTATTATAACTGGGTCTTCATGCA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541 AACAAAATGACTCCAAGATCTAAGAATCTTAGTATTGGTGAATCATTCGGGACTTC 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              501 IGAGAAGITCCAGAAAATAAATCAGATGGTATGTAACAGCGACCGTGTGCTCAAAAGAAG 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GAAATSTAGGTGTTTTGAGTGTTTATAAAAAAGTGTAGGGGTAGGGTATGTGGGGGT 60
                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             n
Similarity 99.0%; Prod No. 136-129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                   Selone-Takepitküsti6"
/elone_lib="313 (synonym: hlcc2)"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                     --
                                                                                                                                                                                                                                                              130 g 198 t
                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                Abropanism-"Bomo sapiens"
Ab_xrof-"tavon.9606"
                                                                                   Location/Qualitiers
                                                                                                                                                                                                       1ab_host-"PHIOR"
Serman Genome Project
                                                                                                                                                                                                                                                              161 C
                                                                                                                                                                                                                                                                                                                                                   Consermative
                                                                                                     .727
                                                                                                                                                                                                                                                              238 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2421 AGALGAA 2427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721 AGATGAA 727
                                                                                                                                                                                                                                                                                                                                                  Matrillars 726;
                                                                                                                                                                                                                                                                                                                  Querry Match
                                                                                                                                                                                                                                                                                                                                     Best [nea]
                                                                                                     e.)J1::18
                                                                                                                                                                                                                                                                             KICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ė
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
```

```
HQQQQQQ7
AVENYOHRI_7566045 NIH_MGC_92 Home sapiens cDNA clone IMAGE:6041563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fekarycia: Motarca, Cherdata: Graelata: Vertebrata: Entelecstomi:
Mammalla, Eutheriu, Frimates, Cataribini: Hominidae: Homo.
                                                                                                                                                                                                                                                                                                                                                                                              CDNA Library Preparation: Life Technologies, inc. CDNA Library Arrayed by: The T M A G E Consortium (LLAL.)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
Cloud through the L.M.A.G.E. Consortium/LLNL at:
http://mage.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         244 GIATTGITTGGALTGTLGAGGAAAITGGAAAGGACATGTGAACITAIATATTTGACAAA 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   544 CAGAACAGGAGTGCACGGATAGCAAAACAACTAGAAATGATACAAGAATTATTGAAGTI 603
                                                                                                                                                                                                                                                                                             National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     484 GAACCAIAIAAAACAGCIGIIAIACCCAIIAAIGGIICACCTCGAACACCCAGGCGAGGT 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              304 CCCASCASTICSAIAICIACIGAAAIAAAIICIGSAIIGGIGCIAAAAGIIICITGGGIC 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 CCCAGCAGTTCGATATCTACTGAAATAAATTCTGCATTGGTGAAAGTTTCTTGGATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               364 ACATITITIATITAGCTAAAGGGGAAGTATTACAAATGGAAGATGTGGTGATTTCATT F 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 ACATTITATTAGCIAAAGGGAAGIAIIACAAAIGGAAGATGATCTGGTGATTTCATTI 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 424 CASTIAATGCIAIGIGGCATSTIGACIATIIAIIAAACICICACCICCCAIGIIGCICAAA 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30] CAGAACAGGAGTGCACGGATAGCAAAACAACTAGAAAATGATAGAAATTATTGAAGTT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GTATTGACACTCTTCAGCAAATTGGAAAGGACATGTGAACTTATATTTTGACACAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21.7%; Score 720.6; DH 14; Longth 880; 98.7%; Prod. No. le 128;
Live 0; Mismatches 9; Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                128;
e 9; Indels
                                                                                                                                                                                                                                                                                                                                   Contact, Robert Strausberg, Ph.D.
Email: cqapbs-rämail.nih.gov
Tissue Procurement, ALCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone="IMAGE:6041563"
/clone_lib="NIH_MGC_92"
                                                                                                                                                                                                                                                   1 (bases 1 to 880)
NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop: 606.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref-"taxon:9606"
                                                                                                                       BQ22227.1 GI:20403627
                                                                                                                                                                                                                                                                                                                 Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ouery Match
Rest Focal Similarity 98.77
Matches 737; Conservative
                                                                               , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .880
                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              321 a
                                                                                                                                                                   human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                         DEFINITION
                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
             во222227
Logus
                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                             KLYWURDS
RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qa ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ďΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
```

 \geq

5

= 3 Ξ 5

5

```
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear EST 18-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone_lib="Nii_MGC_60"
/riseus-rype="adoption-as-riseus"
/riseus-rype="adoption-as-riseus"
/riseus-morann: prostate; Vector: pinkr.LH (Clontech);
/riote="ornan: prostate; Vector: pinkr.LH (Clontech);
/riote="ornan: prostate; Vector: pinkr.LH (Clontech);
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan"
/riote="ornan="ornan"
/riote="ornan"
/riote="ornan="ornan"
/riote="ornan="ornan"
/riote="ornan"
/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             adaptor sequence: 5' randodraliandes's' and 3' adaptor sequence: 5' Alichadadodradocododrado-dr(30)hn 3' (where H - A, C, or G and N - A, C, C, or T). Average insert size 15 kb (range 0'9 4.0 kb): 14/15 colonies contained inserts by PCR. This library was enriched for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutberia; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       602611848F1 NIH_MGY_60 Homo Sapiens conA close 1MAGR.4737634 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be tound through the L.M.A.G.E. Consortium/LLML at:
604 CTCTGIAAAGAACATGAATGIAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATTTT 663
                                                                                              651 CTCTGTAAAGAAGATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTGAAAAATTTT 420
                                                                                                                                                                                                                                             724 CHICHAAACSAFACAAAAAAAHTTALCHAAAAATAAAGAFCTAGATGCAAGATTATTI 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481 CLLICLAAACGATACGAAGAAATITAFCTTAAAAATAGAAGATCTAGATGGAAGAFFATFF 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   844 POACGAAAAGIAAPOILOALGAAGAGGIGAAIGIAAFIGGGAGTAGGAGTAGGGAGTAAGG 903
                                                                                                                                                                                                  664 ATACHTETATGAALICTHIOGACTIGTAACATCTAATGGACTTCGAAGGTTGAAAAT 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         904 ACHGITATGAACACTALCCAACTAALTAALGALTTIAAATTCAGCAAGTGAACC 962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDNA Library Preparation: CLONETECH Laboratories, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                          mknA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Plate: LLCM1605 row: o column: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /ordanism "Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        824 hp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 823)
NIH MGC http://www.nci.nih.acv/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="IMAGE:4737634"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96.4 TTCAGAAAATCTGATTTCCTATTTTAA 989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: eqapbs ramail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tissue Procurement: DCID/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RG610661.1 GI:14662032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . H.Z.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mKNA Sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1836,10,6,6,1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BG610661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               trametra .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOHICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NOLLINIAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JUSTENAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1636101864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FLATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSIEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     I N S WW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S. attle 'S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WE SO
```

```
LOCUS AL563757 AL563757 AL5001_NBC4 Homo Sapiens cond clone cSubbood7xA05 COD
                                                                                                                                                                       2451 AGGAGACTOCAAATITICAGCAGAAACTGGCAGAAATGACTTGTACTCGAACACAATGCA 2510
                                                                                                                                                                                                                                         2511 AAACCAGAAAATGAATGATAGCATGGATACTTTAAAGAAGAAGAAGAAAAAAATGAGGATCTCA 2570
                                                                                                                                                                                                                                                                                                            2571 GGACCTIGGIGGACACIGTGIACACCICIGGAFICATIGICICACAGATGIGACTGIA 2630
                                                                                                                                                                                                                                                                                                                                                                               2631 TAACITTOOCAGGIICIGIITATGOOCAATTTAATATTOAOTIOAOTICITTIGIOAATAL 2690
                                                                                                                                                                                                                                                                                                                                                                                                                                                   0667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2991 TAGAAAATGTGTGTATCTTGCAAATGCAATTTGATTGACTGCCALLCACAAAA 3050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3108 ATTTTACACATTAGATTTTATTTACTATTGGAATCTGATATACTGGTGGCTTGTTTAT 4167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2811 GTTTGCTCTTCCAAAGTAAAATTGCTGTGTTATGGATAGTAAGAATGGCCTAAAATG 2870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8051 TTATCCTGAACTCTTCTGCAAAATGGATATTALTAGAAAIT AGAAAAAAAAITACTA 3107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 TAACTITCCCAGGITCTGTTIATGGCCACAITIAAFATGAGCTOTTHGGGGGAATAT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         =
=
=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601 TTATECTGAACTETTGTGAAAAATGGATALLATFCCGAAATGAGAAGAGALACTA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         718 TAAAATTTGCTTTAACTAACATACAAGCTGGAAGCAAAGTAT-ACCATATGATACTATGA 776
full length clones and was constructed by clontech
Laboratories (Falo Alto, CA). Note: this is a NHLMGC
Library."
                                                                                                                                        sdro :6
                                                                                                                                                                                                         1 AGGAGAGTCCAAATTTCAGCAGAAACTGGCAGAAATGACTTCTACTCGAAGACGAATGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2751 TATITAIACAASATIGAAAAICTIGIGIAAAATO TOOCALLIAAAAAALLOLAGAAATT
                                                                                                                                                                                                                                                                                                                                                                                                  DB 12; Length 823;
                                                                                                                                          34; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3228 TACTACTGAAACAGALTTCATACCTCAGAATGTAAAAGAACT 3269
                                                                                                                                                                                            777 TACTATTGAA - - CAGATTCATACCTCAGAATGTAAAGAACTT 816
                                                                                                      Score 699.6; DB 12
Pred. No. 1.2e 124;
                                                    271 t
                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          142 4
                                                                                                      21.1%;
94.8%;
                                                                                                                                     Matches 779; Conservative
                                                                                                      Query Match
Best Local Similarity
                                                       262 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AL564757/c
                                                    HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 11
                                                                      ORIGIN
                                                                                                                                                                                                                                                                            <u>a</u>
                                                                                                                                                                                                                                                                                                                                              <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              G
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
```

prime, mRNA sequence.

AL563757

```
enriched, double-stranded cDNA was digested with Not I and cloned into the Not I and Eco RV sites of the pcMVSPORT 6 vector. Library was normalized. Library was constructed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Technologies, a division of Invitrogen 9800 Medical Center
Drive Bockwille, Maryland 2005G, 95A Pax (1) 481 F10
8371 Email : fliangalifetech.com URL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Andre "Organ brain, Vector pGMVSBORT 6, 1st Strand chaw was primed with a Notl-Oligo(dT) primer. Five prime end
                                                                                                Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *12 AGABCALGABIGTAATA1AGALGAGGGAAAAATGTTTATTTCAAAATTTTATACCTTT 671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      672 TATGAATTOTOTGGACTTGTAACATGTAATGGACTTGCAGAGGTGAAAA19FTLGTAA 731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                792 IGATAAAACTCTTCAGACTGATTCTATAGACAGTTTTTGAAACAGAGAAGAACAGAAAA 851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               432 AAGTAAPOTTOWEGAGAGGEGAATTOOTOGAÇAÇAÇTÇÇAGITAGGAYTGTTT 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   372 GGACAYTWICCAACAAIIAAIGAIGIIIIIAAAIICAGCAAGIGIICAACCIICAGAAAI 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            792 IAAAACAGCIKITATACCCAFTAA FGTITCACCTCGAACACCCAGGCGAGGTCAGAAGAG 733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               %52 GAGIGGACGGAIAGCAAAACAAATAGAAAATGAIAGAATIAIIGAAGIIGIGIGIAA 611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           872 AGAACATGAATGTVATATAGWTGAGGTGAAAAATGTTTWTTTCAAAAAATTTTATACCTTT 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7.3.2 ACGATACGAAGAAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTAGTTFFFGGATCA 791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    912 GANDACTATOCAACAATTAAATTTTAAATTCAGGAAGTGATGATCAACCTTCAGAAAA 971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3, Gups
                                                                                                                                                                                                                                                                                                                      Email: seqref @genoscope.cns.fr, Web . www.genoscope.chs.fr.
Location/Qualifiers
                                                                                                                            Mammalia; Puthoria, Primatos, Catarrhini, Hominidae, Bomo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact : Feng Liang Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 792,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23, Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26 others
                                                                                                                                                                                               Full-length cDNA libraries and normalization
                                                                                                                                                                          Jessee, J. and Polayes, D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type-"neuroblastoma_cells"
/lab_host-"DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    http://tulllenath_invitrogen_com"
148 c = 117 g = 255 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21.0%; Secre 698.2; DB 9,
93.6%; Pred. No. 2.2e-124;
                                                                                                                                                                                                                                                                        Centre National de Sequencage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib="LT:_NFLO01_NBC4"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/db vrof="tavon-9606"
                                                                                                                                                                                                                                                                      Genoscope Centre National de Sc
BP 191 91006 EVRY cedex - France
                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="@$@nn@@7YA05"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       vector. Library was r
by Lite Technologies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E-1
ALS63757.1 GI:12913464
                                                                                                                                              1 (bases 1 to 792)
Li,W.B., Gruber,C.,
                                                                                                                                                                                                                        Unpublished (2001)
                                                                                                                                                                                                                                                  Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                              Home sapiens
                                                        human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 722;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE CHUNT
                                                                         ORGANISM
                                                                                                                                                 KEFERFN°E
AUTHORS
                                                                                                                                                                                                                        J-3URNAL
                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                  CHAMENT
                                                SHURTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MINING
MINING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
```

```
BG570456 1787 BG 757 bp MRNA linear EST 18 APR 2001 6U2591312P1 NIH_MGC_77 Homo sapiens cona clone IMAGE:4717874 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pukanyita, Metanoa, Cherdata, Craniata, Vertebrata, Euteleustomi:
Mammalia; Eutheria; Primates, Catarrhini; Hominidae; Homo.
1 (bases 1 to 767)
                                                                                                                                              1092 GHAAATIGGAIGAAAAAGAAAAGTIGG--AGTIGGGIIGIATIAGGGAGIAAIGGAA 1149
                                                                                                                                                                                                                                     1150 TCCATGCTTAAATCAGAAGAAGATTATCCATTCAAAATTTTAGCAAACTTCLGAAL 1209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2531 GCATGGATACCTCAAACAAGGAAGAAATGAGGATCTCAGGAGCTTGGTGGAGCTTGGAGCTGTG
                                                            1032 GAAGGATATAGGATACATCTITAAAGAGAAATITGCIAAAGCIGIGGGGACAGGGIGGI
                                                                                                      252 GAAGGATWIKGGATACWIYTTTAAAGAGAAATTIGCTAAAGCTGTGGGACAGGGILGLGT 193
                                                                                                                                                                                           192 CGAAATTGGAICACAGGGAIACAAACIIGGIIGIIICGCIIGIATIACCGAGTAATGGAA 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact. Robert Strausberg, Ph.D.
Bmail. Gapabs Thamil.on h.gov
Lisaue Electuralment. CLONTEGH Laboratories, Inc.
CDNA Library Preparation: CLONTEGH Laboratories, Inc.
CDNA Library Arrayed by: The I.M.AG.E. Consettion (LIME)
DNA Sequencing by: Ineyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIH'MGC http://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Gene Collection (MGC) National Institutes
                                                                                                                                                                                                                                                       4: Gaps
20.8%; Score 602.2; BH 12; Longth 767; 97.1%; Fred. Mc. 3.1e 123;
tive 0; Mismatches 18; Indels 4;
                                                                                                                                                                                                                                                                                                                      1210 GACAA CATITITCATAIGICITIAIIGGCGIGGGGCICIIGAGGIIGIAAI 1259
                                                                                                                                                                                                                                                                                                                                       found through the I.M.A.G.E. Consortium/ILINL at: http://image.llml.gov
Plate: LLCMI568 row: h column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    767 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone-"IMAGE:4717874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Migh quality sequence stop: 726.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xre1-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                     BG570456.1 GI:13578109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 747; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      233 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    36570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BG570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                              BG570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       50.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
```

```
linear EST 05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BM466194
AGENCOURT_6456973 NIH MGC_92 Homo sapiens cDNA clone IMAGE:5576939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Enteleostomi;
Mammalla: Eutherta: Primates: Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4190 AAAAGCTGGAAGGAAAGTATAACCATATGATACTATGTACTGAAACAGATTTCATA 3249*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2951 AATITATAIGIAFATITITTIAAFTAAAAGAGGGTTAGAAAAIGIGTGGTAFCTA 3010
                                                                                           2651 TATGECAPATITAATATCTTCAECTITITGGATATAAAAATGGAGAGGAATTG 2710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2771 FCTIGIGIAAAFCCEGCALIIAAAAAGIIGIAGGAGAFTGIIIGGIGITCGAAAGIAAA 2830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2831 ATTGPGTGTGTGATAGGATAGTAAGAATGGCCCTAGAGTGGGGAGTCCCTCATAACCCAGGC 2890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2891 CHGICLGACTACH LGCCCHCH LIGTAGCAFALAGGIGATGT FCHGHTGTTTTATT 2950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1130 TTACTATTGGAATCTGATATACTGTGTGTGTTTTTATAAAATTTTGCTTTTAAATTAAAT 3189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2711 TITGGGGGAFIGCTAAGCCAGTGAAATGTFAGTGAFGFFAFFFAFACAAGAFFGAAAA 2770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0011 TOTICCAAATGCAAFTGAATTGAOT-GCCCATTCACGAAAAITATGGTGAAGTGFFGFGG 3069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1070 AAAAALGGALALLALLAGAAALLAGAAAAAATTACTAATTETACAGATTGATTATT 3129
                                                                                                                                                                                      61 JAPAPOTELGGALIPALLGICTERGAGAGGIGACITOTATAACITELGGGAGGITETG
                                                                                                                                                                                                                                                                                                                                    THEFFER FOR THE FER PROPERTY AND A STATE OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF THE FER PROPERTY OF TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361 CTGPCTGACTACTCTGCCTCTTTGTAGCATATAGGTGATGTTTGCTCTTGTTTATT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181 TITGGGIGATECTAAGCCACTTGAAATGTTAGTCATTGTTATTATACAAGATTGAAAA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421 AATITATATGTATGTTTTTTTAATTTAACATGAACGCTTAGAAAATGTGCTATCTA 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481 FOLFCOAAA EGCAA FIGGA FIGGA FIGGCOCA FOACGAAA PFFFCO PGAACFICFFCFIG S40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541 AAAAATGGATATTATTAGAAATTAGAAAAAATTAGTAATTTTAGACATTAGATTTTATT 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601 FTACTATGGGAALGTGATALACTGTGTGTGTGTAAAAA-TTGGTTTAATTAAATT 659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         660 AAAAGCTGGAAGC AAGTATAACCATATGATACTATCATACTAATGAAAGAGATTTCATA 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 972) NIH MGC bitp://mer nci nih qov/. National Institutes of Health, Mammalian Gene Collection (MGC)
1 BOATGGATACOTCAAACAAGAAGAAGAAATGAGTGTOAGGACOTTGGTGTGTG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA Library Arrayed by, The L.M.A.G.E. Consortion (DLNE) DNA Sequencing by: Agencourt Bioscience Carporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3297 CCFCAGAAFGI - AAAAGAACTTACTGATTTTTTTTTTCTTCATCCAACTTAT 3297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA Library Preparation: Lite Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Robert Strausberg, Ph.D.
Email: eqapbs rémail.nih.gov
Lissue Procurement: ALCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BM466194.1 GI:18515236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HM466134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Didlica D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRODNISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A PESSTON
VERSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOHNAI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RM466194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1111E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E STORES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ā
                                                                                                                                                                                                                                                                                                                                                                       2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
```

```
/clone_lib="NHLMMC_92"
/clone_lib="NHLMMC_92"
/tissue_type="embryonal carcinoma, cell line"
/tissue_type="embryonal carcinoma, cell line"
/tab_bost="bilde" (phage resistant)"
/tab_bost="bilde" (phage resistant)
/tote="formar restis vector: pCMV Sports; Site_l: Not]:
Site_2: Sall; Cloned unidirectionally, oligo dT primed.
Average insert size 2.5 Kb. hibrary enriched for full-length clones and constructed by lite fechnologies.
Note: this is a NHE_MMC_Library.

2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2467 CAGCAGAAACIGGCAGAAAIGACIICTACICGAACAGAAIGCAAAAGCAGAAAAII 2526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2527 GATAGCATGGATACCTCAAACAAGGAAGAAAATGAAGATCTCAGGACTTGGTGGACAC 2586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2587 TGTGTACACCICIGGATICATTGTCTCACAGAIGIGACTGTATAACTILCCCAGTTC 2646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2647 TGTTTATGGGGATATTAATATGGTGTTTTTTGGGGATATAAAATGTGGAGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2707 AITGITTGGGTGATTCCTAAGCCACTTGAAATGTTAGTCATTGTTATTAGAAGATTG 2766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2767 AAAATCTTGTGTAAATGC1GCGATTTAAAAAGTTGTAGCAGATTGTT1GCT/°FT°VAAAG 2826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2947 TATTAATTTATATGTATATTTTTAATTTAACATGAAGAGGTTAGAAALGTGTA-3006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3007 TCTATCTTCCAAATGCAATTTGATTGACTGCCCATTCACAAAATTATCCTGAAACTCTTC 4066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2827 TAAAATTGGTGTGCTTTATGGATAGTAAGAATGGCCTAGAGTGGGGAGTCTTGATAACCC 2886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 TGTGTACACCTCTGGATTCATTGTCTCTCACACATGTGACTGTATAACTTTCCCAGGTTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361 TAAAA PROCTGROOTTTATGGATAGRAAADAARGGOOTTAGAAGRGGGGAGTOOTGATAAGGO 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481 IATTAATTTATATGTATATTTTTTAATTTAACATGAAGACCCTTAGAAAAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601 TGCAAAAATGGATATTATTANAAATTAGAAAAAAAATTACTAATTTTACACATTAGATTTT 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLML at: http://mage.lln.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2887 AGGCCTGTCTGACTAGCCTACTTTGTAGCATATAGGTGATGTTTGCTCTTGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20.8%; Score 691.8; DH 14; Langth 972; 96.7%; Pred. No. 3.5e 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 6.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. 4,5c 124;
                                                                        Plate: LLAM12429 row: j column: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                 /organism-"Homo sapiens"
                                                                                                High quality sequence stop: 621.
                                                                                                                                                                                     Adb_x1.f-"13x0n:96(16"
                                                                                                                   Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 728; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ouery Match
                                                                                                                                              Source
                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q (1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
```

```
DEPTINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A:13:45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BI868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                        ä
                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                    d
                                                                                                                                                     linear RST 05-FEB-2002
                                                                                                                                                   HM453724 B35 bp mFNA linear EST 05-FEB-2003
AGENCYMPI_6402743 NIH_MGC_72 Homo sapiers cDNA clone IMAGE.5728R14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alizabell, per "mellandlic mellanma".
Alab host. "BH108 (phage resistant).
Ande "Grann skin Vertor EMMY SFAFF, Sibell Nett.
Site_2: Sall; Cloned unidirectionally. Primer, Oligo dr.
                                                                                                                                                                                                                                                                                                                             Eskaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Library constructed by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1428 ACGATGTGAACATCGAATGATGAATGCCTTGGAATGGTGTGAGATTGAGTTTATTTGA 1487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1488 ICTTAFTAAACAATCAAAGGACGGAGAAGGACCAACTGATCACCTTGAATCTGCTTGTGC 1547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1548 ICTIAALCITCCTCTCCAGAATAATOAÇAGTGCAGAGATATGTATGTTGTTGTTGTTAGAG 1607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1608 ATCTCCAAAGAAAAAAACCTTCAACTACCCGTGTAAATTCTACTGCAAATGCAAAAAGACACA 1667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1228 TAAAAAAGIGTATGGGCTAGCCTATCTGGGCTAAATAGAGTTTGTGAAGGGGTTGTGTG 1787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     chNA Library Preparation, Life Technologies, inc. (LNAL) DNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Apencourt Bioscience Corporation Clone distribution. NGS clone distribution indomnation can be tound through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              254 AGGAKGTCAGGCTCGAGAGCGAGAAAGCAITGAAATCTAGCTCTTTCACTGTTTA 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7.8. TOTTATTAAACAATCAAAGGACGAGAAAGGACTGATGACTLGAATCTGGGTGTGTGC 132
                                                                                                                                                                                                                                                                                                                                                                                        WHENCE has considered as the results of Health, Mammalian Gene Collection (MCC) National Institutes of Health, Mammalian Gene Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cales
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ر
ن
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20.4%; Score 678; DB 13; Length 835; 100.0%; Pred. No. 1.7e-120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 of hers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                http://image list gev
Plate: LiAM12266 From c column: 07
High quality sequence stop: 647.
Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              533
4182 AATTAAATAAAAGCT-GGAAGCAAAGTATAACC 3213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20.4%,
100.0%; Prod. No.
                                           721 ATTAAGATAAAAGCTGGGAAGCAAAGTATAACC 753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Average insert size 2 kb. Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: ogapbarranail eik arv
Tissue Procurement: ATCC/DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Actobo Lib-"NIH_MOC_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref-"taxon:9606"
/clone-"!MAGE:5528814"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              137 4
                                                                                                                                                                                                                                         HM453724.1 G1:18502764
                                                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 835)
NIB MIT heth (Paper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              210 0
                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999)
                                                                                                                                                                                              mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         835
                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sirilarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                254 a
                                                                                                                                                                                                                   BM45 5724
                                                                                                                                                                                                                                                                                       human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 678;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Curry Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1003
                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE YOUNT
                                                                                                          RESULT 14
8M454724
                                                                                                                                                                                                                A CESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                      JUST BAY
                                                                                                                                                                                                                                                              KEYW KUN
                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                            VERSTON
                                                                                                                                                                                                                                                                                                                                                                                                                 3715
                                                                                                                                                                                                                                                                                                                                                                                                                                                            : MMENT
                                                                                                                                                     X2,50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      - <del>-</del> -
```

```
/note-Organ: liver; Vector: pCBNV-SPORT6: Site_1: Not1: Site_2: Sall: Cloned unidirectionally; olino-dT primed. Average insert size 1.7 kb. Library enriched for full-tength: clores and constructed by Life Technologies. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                      1968 TCCTCATGCTGTTCAGGAGACATTCAAACGTGTTTTGATCAAAGAAGAGGGGGTATGATTC 2027
                                                                                                                                                1848 GTATGAACTCATGAGAGAGAGGCATTTGGAACAAALGAGGGTGTGCGATGTAIGGCAI 1907
                                                                                                                                                                                                                                                     1908 ATGCAAAGTGAAGAATATAGACCITAAATTCAAAATCATTGTAACAGCATACAAGGATCT 1967
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1818 TALIAIANIALIJIATAAGTGGGTGTTTATGGAGAGGAAAAGAAATATTTGGAGLA 2087
                                               1788 IGAGCACCCAGAATTAGAACAIATCAICIGGACCCTTTIUCAGCACACCCTGUAGAATGA 1847
                                                                       433 GIALGAATICALGAGAGA AGGTATITGGACTAAAITAEGAIGIGITCCAIGIAIGCAI 492
                                                                                                                                                                                                                                                                                                    493 AUGCABAGUGAAGABTATAGAGCTTTAAATTCAAAATGTTGTAACAGGATAGAAGGATGT 552
                                                                                                                                                                                                                                                                                                                                                                                                     553 TOCTICATGITCAGGACACATICAAACGIGITITGAIGAAGAAGAAGAGAGIATGAITC 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDNA Library Preparation: Lile Technologies, Inc.
CDNA Library Arrayed by: the T.M.A.G.B. Consortium (LLINL)
CDNA Sequencing by: Incyte Genomics, Inc.
Cloud distribution: MGC clone distribution information can be found throught the T.M.A.G.E. Consortium/LLNL at:
Plate: LLAM12026 row: k column: 07
313 TAAAAAAAGTGTATCGGCTAGCCTATCTCCGGCTAAATACACTTTGTGAAGGCCTTTCTGTC 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19.9%; Score 660; DB 13; Length 672; 99.9%; Pred. No. 5e-117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib="NIH_MGC_90"
/tissue_type "adenocarcinoma, cell line"
/lab_host="DH10H (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0: Mismatches
                                                                                                                                                                             Ospublished (1993)
Contact: Robort Strausberg, Ph.D.
Email: cyaphs-r*mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xrel="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           High quality sequence stop: 668. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone-"IMAGE:5402622"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BI868359.1 GI:16042032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2988 ISCIIOCACCAGOCOCO 2105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 673 1GC11GCACCAGGCCCCC 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 671; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8:868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BI868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hest Lecal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
```

2189 2249 513 2209 121 2429 241 2429 301 2429 401 2509 401 2729 2729 27
--

...

Search complexed; Janoury 18, 2003, 04:07:25 5dc time : 2939.95 sees

•
· ·
•
•

Copyright (c) 1993 - 2003 Compugen Ltd. GenCore version 5.1.3

Perfect score; 08 09 026-4594 83 Perfect score; 4472 MENVSSUBJUSTER Scoring table; BLOSHMA2 Xqapop 10.0 , Xqa	DS 09-026-4594-33 4-92 1-MERVSSVIHTUTÄR LÄNARE MJOSHMAN XNARON 10-0-1-XNARON 10-5-5 XNARON 10-0-1-XNARON 10-5-5	FMENGRMNISMES SNRFF K 45
	t x at a report	
Yqabob 10.0 , Fqabob 6.0 , Delop 6.0 ,	Ydapext Ydapext Fdapext Delext	
Sear ched: 16154066	16154066 seys, 8097743376 residues	sidues
unbor of hits safi	total number of hits safisfying chosen parameters:	eters: 32308132
Micromom bB seq length: 0 Maximum bB seq length: 200000000	0000000000	
Fost processing: Minimum Match 108 Maximum Match 10 Listing thist 45	Minimum Match 0% Maximum Match 100% Listing first 45 summaries	

Model fine parameters:

Model forward line barameters:

Model forward

```
em_gss_other:*
em_gss_pro:*
em_gss_rod:*
                                                                                         gb_dss:*
em_qss_hum:*
                                                                                                   inv:
                                                                                                                        em_qss_mam:*
                                                                                                        em_qss_plu:*
                                                                                                              dss_vrt:*
                                                                                                                   em_qss_fun:*
                                                                              em_estem:*
          em_esthum:*
em_estin:*
                    em_estmu:*
                                    em_estio:*
em_htc:*
                                                                   #:4:*
     em_estba:*
                                                    qb_est2:*
                                                               qb est 4:*
                               em estpl:*
                                               tp ost 1:*
                                                                                                    em dss
but abase :
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

			æ			SUMMARIES	
Result	+		Query				
Ž	ِ ا	2150g	Match	Match Length DB	r.	100	lasser iption
	_	1558	45.6	Ğ.	11	AK011246	AK011246 Mus muscu
	~	1551		1051	13	BM561084	
	~ ·	446	33.1	88	~ :	BQ220275	
	4 1	1 5.59		1001	- :	BM475603	~
	: 4	10.46.5		: œ	14	BOTTOTOTO	Test control and the second
	۲.		57.6	H 45	· ~	BM453724	
	œ			1023	13	0	_
ţ,	ث	1056.5		£ (6		+- 4	>
ti		1043		3.65	ĵ.	ALS64257	ALS6 1757 ALS6 1757
	_ :	1037		505	y .	~	AL599633 DKFZp313P
c	04 F	0801		বা ও জুন	O 0	BE082846	
	~ •	1016	ni d	7 . 2 . 2 .	2	AW584181	AWS83181 iailh09.y
c	4 -	1013		7 € 20 €) ج	<	
	n 5	400					
	0 1	10 / J	74.0	10 CE	2.5		
		700	77.0	7.55			
	χ.,	უ ე ე	5.12	400	Ç:		AV71554
	τ c	2 2 2 3 3 3	20 F	280	-1 -		
) - V (0.746	7	7 14	-4 (BF144857 601790443
	(25.00 0.000 0.000	- C	7. 4. 4. 2. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4.	5 F	AL692790	
	10	0000	0.0	7.0	? :	8110 5 417 B	795790109 8/7/2010
	۳. « ۱۷. ۵	00 CC	0.00	7	ب ج	AL. 12094	
	er u	C 4 0 9 0	→ c	D C 7	7 -	131 141 141 141 141 141 141 141 141 141	
	3 :) X	7 -	3 [-	00075755	1977 7 20 20 20 20 20 20 20 20 20 20 20 20 20
ຸບ	27	844	19.5	484	10	8515544 86168045	
	8 .	833.5	19.1	646		BM4 904 16	
	50		18.8	493	2	AW502887	
	Ö.	815.5	18.7	04 04 01	Ç.	AA072780	Ε
	3.1	815	3.8.6	832	ъ,	A1646038	A1646038 vw54a10.x
	CI.	784	17.9	2083	13	BM456728	
	33	751	17.2	453	10	AW503514	AW503514 UT-BF-BN0
Ü	- -	700	16.0	462	J.	A1606529	A1606529 vb27q08.y
	20 0	£89	5.6	7 T T	2 :	BF827047	BF827047 RC3 HN002
	010	r.	6.01	55/1 100	7 :		182304 L
	× 0	0.700		TO .	5 F	A154509/	>
	ם ממ	/ QQ V		100	η : :	81595841	
	n <	600	- u	000	2 -	AW4016U4	
) r	r 0	n -	07.4	2.2	86280796 51060366	88283796 601046510
		0 0 0		N 5	2.2	5000303	
	u o	1) D U D	Y) (1	110	4.5	14F455555	
		0.020		/ E -	7 -	2000.48	= .
c		613 613	14.0	Q :		A1/45544	17.241.06
ပ	4 ℃	- - -	0.	-	7	BF560104	RE560103 UL-R AL C
						ALIGNMENTS	

ALIGNMENTS

	RESULT 1		
	AK011246		
	1.OCUS	AK011246 18-JAN-2002	C 19-JAN-2002
	DEFINITION	Mus musculus 10 days eml	1 · Length
		enriched library, clone:2609017M22:redinoblastoma 1, 1011 insert	ull insert
		Sequence.	
	ACCESSION	AK011246	
	VERSION	AK011246.1 G1:12847243	
_	KEYWORDS	HTC; CAP trapper,	
	SOURCE	Mus musculus (strain:C5781/63) 10 days embryo ebna to mkNA,	mkna,
		clone_lib:RIKEN tull-length enriched mouse cDNA library	>
	ORGANISM	Mus musculus	
		Plante many to a many or a Charles of the control o	

Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleosfomi; Mammalia, Eutheria, Rodentia, Sciuroquathi, Muridae, Murinae, Mus.

```
Kawai.J., Shinaqawa.A., Shibata.K., Yoshino,M., Itoh,M., Ishii.Y.,
Arakawa.T., Hara,A., Fukunishi,Y., Konno,H., Adachi,J., Fukuda,S.,
Arakawa.T., Hara,A., Fukunishi,Y., Konno,H., Adachi,J., Fukuda,S.,
Alzawa.M., Izawa,M., Nishi,K., Kiposawa.H., Kondo,S., Yamanaka,J.,
Saito,F., Okacaki,Y., Coiporni,T., Sharaha.T., Saito,P.,
Radota.K., Matsudo,H., Ashburner.M., Batalov,S., Casavant,T.,
Fleischmann,W., Gasterland,T., Gissi.C., King,B., Kochiwa.H.,
Kuchl.P., Lowis,S., Matsuc,Y., Nikaido,I., Fuculi,R., Tomita,M.,
Wadner.L., Washio,T., Sakai,K., Okido,T., Furuno,M., Aono,H.,
Haldarolli,R., Barshio,T., Sakai,K., Okido,T., Furuno,M., Aono,H.,
Haldarolli,R., Barshio,T., Sakai,K., Okido,I., Edithoich,S., Hill,D.,
Haldarolli,R., Barshio,T., Sakai,K., Mombactts.F., Nordonc,P.,
Fletcher,C., Fujila,M., Gariboldi,M., Gustincich,S., Hill,D.,
Hotmann,M., Hume,D.A., Kamiya,M., Lee,N.H., Lyons,P.,
Marchionni,L., Mashima,J., Marmarclii,J., Mombactts.F., Saraki,H.,
Sato, K., Schonbach, C., Seya T., Sakamcto,N., Sasaki,H.,
Sato, K., Schonbach, C., Seya, K., Waha,Liming,L.,
Wynshaw Boris,A., Yoshida,K., Haseqawa,Y., Kawaji,H., Kohisuki,S.
and Hayashizaki,Y.
Naturo 409 (6821), 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Adachi T. Alzawa F. Akahira S. Akimura T. Acco H. Arai,A. Arakawa,I., Haldarelli,R., Bono,H., Brownstein,M., Halt,C., Carninci,P., Fukuda,S., Fukudishi,Y., Furunci,M., Hanagaki,T., Hara.A., Hayatsu,N., Hill,D., Hramoto,K., Hiraoka,T., Hori,F., Hume,D., Imolani,E. Ishii,Y. Itoh,M. Izawa,M., Kasukawa,T., Kare H. Kawai,T., Kojima,Y., Konco,H., Konda,M., Koya,S., Kurihara,C., Matsuyama,T., Miyazaki,A., Nichi, F., Nomaraki, R., Ohno,M., Okada, K., Sano,H., Sasaki,D., Salto,H., Salto,R., Sakai,C., Sakai,K., Sano,H., Sasaki,D., Schrimi,L., Shibata,K., Shibata,Y., Shinaqawa,A., Shiraki,T., Sonabe Y., Shinaqawa,A., Shiraki,T., Yasunishi,A., Yoshida,R., Voshino,M., Muramatsu,M., and
                                                                                                                                                                                                                                                            Carmingi, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramaisu, M., and Hayashizaki, Y., Nuramaisu, M. and Hayashizaki, Y., Nurmailatation and subtraction of cap-trapper-selected cDNAs to prepare full-hendth cDNA libraries for rapid discovery of new genes common Pos. 10 (10) 1417-1430 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Pujiwake, S., Inouce, K., Togawa, Y., Tawa, M., Ohara, F., Watahiri, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Maramaiss, M., Inoue, Y., Kira, A., and Hayashizaki, Y. Wiramaiss, M., Inoue, Y., Kira, A., and Hayashizaki, Y. Seguchiring Fight Faga analysis (RTSA) system—3R4-format seguchiring Fight Fawarish RA multisepillary sequencer change (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Shibata,K., Itoh,M., Alzawa,K., Naqaoka,S., Sasaki,N., Carninei,P., Konno,H., Akiyama,J., Nishi,K., Kitsunai,T., Tashiro,H., Itoh,M., Sumi,N., Ishii,Y., Nakamura,S., Hazama,M., Nishine,T., Harada,A.,
                                                     High-efficiency Iull-length cDNA cloning Meth. Enzymol. 303, 19-44 (1999)
                                    Carmine' P. and Hayashiaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 1364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21085560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                20499374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11076861
                                                                                                                                                                                           10349€ ₹€
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11217851
                                                                                                                                                                               PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITE
FORENA:
MEDITINE
KEKEKENCE
                                                                                                                                                                                                                                                                     AUTHOPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDICINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTH-IRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PUISMED
                                                                                                                                                  MEDI.I NE
                                                                                                                                                                                                                                SEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                              J. UKNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                PANADE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNA!
                                                                                                                                                                                                                                                                                                                                                  LITLE
                                                                         LITLE
```

Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Vokohama Institute 11-7-22 Stebino-Cho, TSTITE Ru, Yokohama, Ku, Yokohama, Kanayawa 230 0045, Japan (Einel getome resease. Fixen go.jp, URL: http://www.as.ib.org/lb.as.ib.

Submitted (10 JUL-2000) Yoshihide Hayashidaki, The Institute of

Hayashizaki,Y. Direct Submission

JULKNAI.

111.5

```
YETRESPEALLREPYKTAALETINSSERTPRRÖGNESAR FANDLENDTRITEVICKEHE
CNIDEVKNVYFKNETPETINSLGTVSSNGLPEVESLSKRFEEVYLKNKDLDARLETDHD
KTLOTDFTSFEFFERTFRKNHDDEFANVYTPHTTVRTVMHTTGGLMYTLASASDÓPSF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clonc_lib-"RiKEN full-length enliched mouse cDNA library"
/dev_stage-"10 days cmbryo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EIEEPEFIALTOKLKVPHIVPEPAMITWEKVSSVTGITFGYTGEKKELWGICTFTAAV
DLDEMPFTFTELQKSIETSVYKFFDLLKEIDTSTKVDNAMSRLLKKYNVLGALYSKLE
RTCELIYLTOPSSALSTEINSMLVLKISWITFLLAKGEVLQMEDDLVISFQLMLGVVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="MGD:MG1:97874"
/translation="MPPKAPKRAAAEPPPPPPPPPPPREDDPAGDSGPEELPLARLEPE
                                                                                                                           eDNA library was prepared and sequenced in Mouse Genome Encyclopedia Fioject of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in Kinkh. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        487 GAGITACAGAAAAGCATAGAAACCAGTGTGTATAAAATTCTTTGACTTATTAAAAAGC 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            427 TOSSISTATIONS AT TITATOS AGENCIAS TOS ACCUPACIONAL ASSESSMENT AND TRANSPORTED AND ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42 GlubouGlnDysAsmileGluIleSerValHisLysPhePheAsmLeubysGluIle 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22 TrpGly1leCys1lePheIleAlaAlaValAspLeuAspGluMetSerPheThrPheThr 41
Pax:81-45-503-9216)
Ploase visit on web site (Arth Circano garriber polic)
further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note-"data source:MGD, source key:MG1:97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            346 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /protein_id="BAB27493.1"
/db_xref="G1:12847244"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-026-459A-33 (1-851) x AK011246 (1-1364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       307 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /strain="C5781/6J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NLISYFNNCTVNP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        evidence: 1SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon_start-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .>1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /qene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         558,00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96.398
90.068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30e c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         35.648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . 1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HOSt: SOLR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           404 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ..
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                             LNGMMOO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ġ
```

```
EST 20 FFB 2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PM5510B3 ESST 00 TER 2003
AGENCOURT 65661 0 NIH MGC_67 Homo Sapiens cONA clone IMAGE:5550905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Enkaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10.27 TTTATAAATTCACTTGGAATTGTATCATCAATGGACTTCCAGAGGTTGAAAGTCTTTCT 1086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1207 AAAAACAACCCIGA IGAAGAAGAGAAAAGIGGI FACTIÇCACACACACCACTTAGGACTIGTIT 1266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       66.7 ACHORITATICHARINGAAATAAAHTCHAHOHIGGHAAAAATTICHIGGATCACTTIT 726
                                                                                                                                                      122 LeutenAlaLysGlyGlaValLeuGlnMetGlnAspAspLeuValIleSerPheGlnLeu 141
                                                                                                                                                                                                                                                                                                                                                                                                                              242 LysArqTyrGluGluIleTyrLeuLysAsnLysAspLeuAspAlaArqLeuPheLeuAsp 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            262 HisAsptysThriguGinThrAspSetileAspSerPheGluThrGlnArgThrProArg 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    282 TysserAsnLeuAspGluGluValAsnVallleProProHisThrProValArgThrVal 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                102 Met AsuThrileGinGluLeuMet Met IleLeuAsnSerAlaSerAspGinProSerGlu 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mammalia: Butheria: Primates: Catarrhini: Hominidae; Homo.
1. (Chases 1-ro 1051)
NHH MGC http://wes.nci.nih.gov/.
National lustifutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                           727 TTACTAGCTAAAGGAGAGTALTACAGATGGAAGATGAGCTGGTAALCTCATTTCAGGTA 786
                                                                                                                                                                                                                                    142 MetteufysValleuAspFyrPbelleLysLeuSerProProMetLeuLeuLysGlupro 161
                                                                                                                                                                                                                                                                     787 ATGITGIGIGIAGITGACITATITATIAAGITCICACCICCICCIACIACITCAGAGGCA 846
                                                                                                                                                                                                                                                                                                                 162 PyrtysthrAlaValtLeProffeAsnGlySerProArgThrProArgArgGlyGlnAsn 181
                                                                                                                                                                                                                                                                                                                                                                                           182 ArqSerAlaArqIleAlaLysGlnLeuGluAsnAspThrArqIleIleGluValLeuCys 201
82 PheAlateutheSertystenOluArqthrCysGluteutleTyrteuthrGlnProSer 101
                                                                                                                                                                                                                                                                                                                                 222 PhoMet AshSertzeuGlytzeuValthrSerAshGlytzeuProGluValGluAshLeuSer
                                                                                                                                                                       13.27 AATCTGATTGCTACTTCAATAATTGCAGAGAGAAT 1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               422 AsuteutleSerfyrPheAsuAsuCysfhrValAsn 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (1999)
Contact: Robert Stransberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: eqapbs:r/mail.nih.gov
lissue Procurement: ALCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BM561083.1 GT:18805043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   57, <mark>mKNA зе</mark>чиеное.
ВМ561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Romo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NELLINITES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DRGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     THILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HM561084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PESUL 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1118
                                   ŝ
                                                                            5
                                                                                                                                                                                         Ē
                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                    \sim
                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                 \frac{2}{3}
                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                            Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
```

conA Library Preparation: Life Technologies, Inc.

```
/tissuc_type="retinoblastoma"
/lab_host="DHIOB (phage-resistant)"
/note="Organ: eye; Vector: pCMV-SPORT5; Site 1: Not1;
Site_2: Sall; Cloned unidirectionally, Frimer: oligo dT.
Average insert size 1.75 kb. Library constructed by Life
Technologies."
cDNA Library Arrayed by: The L.M.A.C.E. Consertion (LLNL)
DNA Sequencing by: Ageneourt Bioseience Corporation
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              996 PheSerLysLeuLeuAsnAspAsnIlePheHisMetSerLeuLeuAlarysAlaLeuGlu 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          416 ValValMetAlaThrTyrSerArgSerThrSerGluAshIeuAspSerGlyThrAspLeu 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 436 SerPheProTrpHeLeuAsnValLeuAsnLeuLysAlaPheAspPheTyLlysValHe 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             244 TCTTTCCCATGGATTCTGAATGTTTAATTTAAAAGCCTTTGATTTTTACAAAGTGATC 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  456 GluSerPhelleLysAlaGluGlyAsnLeuThrArqGluMetIleLysHisLeuGluArq 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          476 CysGluHisArqIleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeu 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    864 TGTGAACATCGAATCATGGAATCCCTTGCATGGCTCTCAGATTCACCTTTATTTGATCTT 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  496 HetyschnysAspargCludTyProthrAspHisteuGluserAlacysProtou 515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             536 ProLysLysLysClySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGlnAla 555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         544 CCAAAGAAAAAAGGIICAACIIAGGGGIGIAAAIICIACIGCAAAIGGAAAGAGACAAGA 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     556 ThrSerAlaPheGlnThrGlnLysProLeuLysSerThrSerTeuSerTeuPheTyrLys 575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              356 AlaValGlyGlnGlyCysValCluIleGlySerGlnArqTyrLysLeuGlyValArqLeu 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64 TATTACCGAGTAATGGAATCCATGCTTAAATCAGAAGAAGAAGGATTATCCATTCAAAAT 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   376 TyrTyrArgValMetGluSerMetLeuLysSerGluGluGluArgLeuSerIleGluAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       516 AsnLeuProLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerProValArqSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 ofhers
                                                                   found through the I.M.A.G.E. Consortium/LLNL at: http://imaqe.llnl.gov
Flate: ilAM12263 row: m column: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Constive:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                         ¥ 55.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                             1. .1051
/organism-"Homo sapiens"
/db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-026-459A-33 (1-851) x HM561083 (1 1051)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                     /clone_lib "NIH_MGC_67"
                                                                                                                                   High quality sequence stop: 737.
Location/Qualifiers
                                                                                                                                                                                                                                           /clone-"IMAGE:5550905"
                                                                                                                                                                                                                                                                                                                                                                                                                      197 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.550-154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1551.00
93.26%
91.50%
                                                                                                                                                                                                                                                                                                                                                                                                                         551 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15.48%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                      HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
```

14. 595 AC 723 AC 723 AC 723 AC 723 AC 723 AC 783 AC 783 AC 843 AC 843 AC 843 AC 843 AC 843 AC 843 AC 843 AC 903 A	ACCTCAGG	-1514-1711111111111111111111111111111111	Percent Best Loc	Percent Simi Best Local S
### US-09-022 #### 131 #### 2002 #### 2002 #### 2002 ##########	SysValTyrAr		Hest Quer DB:	Matcl
# 61%	4AAG1G1A1G	7.3	.0-S0	9-026-15
625 99 151 993 674 123 674 09 191 963 674 09 191 963 10 09 231 9644522 09 231 9644522 09 231 9644522 09 231 9644523 09 231 97 191 97 191 98 189 189 99 371	HisProGluba HILLILLIL MCCCAGAATT	78	da ,	
655 674	1141 cometa 3AAC1CA1GA			
### 027 191 #### 2002 Dib 243 #### 2002 Dib 363 ###################################	LysVallysA HTHHHH: AAAGTGAAAG			
1020 1020 1020 1020 1031 1020 1032 1032	oHisAlaVal CAIGCIGNI		<i>ਨ</i> 2	
mRNA lincar HST 62.MAY 2602 sapiens chNA clone IMACE:6644522 Gy 251 mista, Vertebrata, Elebestemi, 60 423 arrhini; Hominidae; Homo. mistian Gene Collection (MGC) 69 291 mistian Gene Collection (MGC) 69 291 mistian Gene Collection (MGC) 69 331 stribution information can be 69 843 ortium/LLNL at: 69 331 carcinoma, cell line" 69 371 the 724 carcinoma, cell line" 69 371 the 724 carcinoma, cell line 69 88 the Library enriched for 69 883 the Library enriched for 69 11 10 110 110 110 110 110 110 110 110	Hetheval HH FATALAAGN	TelleValPhetyrashservalPermidelnargeau ysterasi 16 (9]	7.7 0.0	21: VJ
echnologies, Inc. echnologies, Inc. consention (MGC) consention (INV) stribution information can be cortium/LLNL at: cortium/LLNL at: correctionma, cell line* correctionma, cell line* correctionma, cell line* correctionma, cell line* correctionma, cell line* correctionma, cell line* correctionma, cell line* correctionma, cell line* correctionma, cell line* correctionma, cell line* correctionma, cell line* correctionma, cell line* correctionma, cell line* correctionma, cell line* correctionma, cell line* correctionma, cell line* correctionma, cell line* correctionma, cell line* correctionma, cell line* correctional correction of page 120 cm and 120 c	BQ228275 AGENGOU	881 bp mRNA lincar HST 02-MAY NIE MOY 92 Homp sapless chNA close IMACH:604	Q 0 y 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
arrhiniy Hominidae: Homo. arrhiniy Hominidae: Homo. arrhiniy Hominidae: Homo. Oy 291 Db 483 A C w Constribut (HNF) Stribution information can be corporation Stribution information can be corporation Stribution information can be corporation Stribution information can be corporation Stribution information can be corporation Stribution information can be corporation Stribution information can be corporation Stribution information can be corporation Stribution information can be corporation Stribution information can be corporation Stribution information can be corporation Stribution information can be corporation Stribution information can be corporation Stribution information can be corporation Stribution information can be corporated for corporation Attribution information can be corporated for corporation Stribution information can be corporated for carcinomatic can be stributed for carcinomatic can be stributed for can be corporated for can be corporated for can be corporated for can be carcinomatically can be carcinomatic can be carcinomatically can be carcinomatic	5', mknA se BQ220275 BQ220275.1	quence. GI:204016.75	Cy Dp	251 As 363 AA
mealian Gene Collection (MGC) (by 29) mealian Gene Collection (MGC) (by 31) echnologies, Inc. A to Conscrition (LIN ¹) stribution information can be got 330 stribution information can be got 337 outlum/LLNL at: carcinoma, cell line* carcinoma, cell line* the 724 carcinoma, cell line* c	human. Homo san	ione	Oy	271 11
mmalian Gene Collection (MGC) by 291 echnologies, Inc. A C P Consertium (HIN') stribution information can be corporation ortium/LLNL at: 03 carcinoma, cell line* resistant)* carcinoma, cell line* resistant)* carcinoma, cell line* resistant)* carcinoma, cell line* resistant)* carcinoma, cell line* resistant)* carcinoma, cell line* rich 72 4 the 72 4 the 74 4 the Technologies resistant dy Life Technologies resistant de Technolog	Eukaryot Mammalia	niata, Vertebrata, Esteleos arrhini; Hominidae; Homo.	9 0	423 AT
echnologies, Inc. A C P Consertium (HAV) Selence Corporation Stribution information can be cortium/LLNL at: 03 carcinoma, cell line" resistant) kb. Library enriched for primed constructed by Life Technologies A ERSULT 4 RESULT A RESULT	1 (base NIH-MGC National	mealian Cone Collection	Å å	
echnologies, Inc. A to Consertion (1:N') stience Corporation ortium/LLNL at: ortium/LLNL at: fortium/LLNL at: fortium/LNL at	Unpublis Contact:			
Substitution (TENT)	Email: C Tissue F	qapbs-remail.nih.qov roourement. ATCC	qq	
1	CDNA LI	-	5	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Clone o	rmation	ਵੇਂ	
Db	http:// Plate: J	iran-11n1 a.∵ LLAM13287 row: e column: 03	Z.Y.	
1110c" 124 1	High gue	ality sequence stop: 690. Location/Qualifiers	90	
Alb. xrrl_": xr.g. acc. acc. acc. acc. acc. acc. acc. a	90	1881 /organism-"Homo sapiens"	ογ	
Actions 155 g 254 t. 185 g 254 t. 185 g 254 t. 185 g 254 t. 185 g 254 t. 185 g 254 t. 185 g 264 t. 185 g 264 t. 185 g 264 t. 266 t. 26		74b,xr=t="tax-a = 9666" /rlone="!MAGE:6044522"		
//ab_host="huld" (phage=resistant)" Discrete "bright (phage=resistant)" Side_2 = Salr - "loned unidirections proves primed Arcrage incert circ 2.5 kb. Library enriched for holy Arcrage incert circ 2.5 kb. Library enriched for holy Full -length clones and constructed by Life Technologies holy Note: this is a MH MGC Library." RESULT 4 RESULT 4 RESULT 4 RESULT 4 RESULT 4 RESULT 4 RESULT 4 RESULT 4 RESULT 4 RESULT 4 RESULT 4 RESULT 4 RESULT 4 RESULT 4 RESULT 4 RESULT 4 RESULT 4 RESULT 4 RESULT 5 LONIS		/richo_lib-"NIH_MGC_92" /tissuc_type-"embryonal carcinoma, cell line"	27.	
Sile_7: Sall Chomen unidirection 1/3; oling of primed of Accrage insert size 2.5 %L. Library enriched for full-Tength clones and constructed by Life Technologies of Note: this is a NIH_MGC Library." Note: this is a NIH_MGC Library." RESULT 4 RESULT 4 149 c 155 g 264 t RESULT 4 160 160 160 160 160 160 160 160 160 160		/lab_bost="DH10H (phage-resistant)" /note="Organ: lestis; Vector: pCMV-SPORT6; Site_1: Not1;	q c	
Note: this is a NIH_MGC Library." 149 c 155 g 264 t		Site_/* Sall: "long-1 unidirentionily; olity dI primad Average incert die 2.5 Kb. Library enriched Till-tength clones and constructed by Life Technologies	් සි	
		Note: this is a NIH_MGC Library." i 149 c 155 g 264 t	RESUL BM475	ET 4 5603 8

881

Length: Matches:

1,17e-143 1448.00

Alianment Scores: Prod. No.:

```
RM475603 1001 bp mRNA linear EST 05-FEB-2002
AGENFOHRT_6480007 NIH_MGT_92 Home saplens CDNA clone IMAGE:5575683
                                                                                                                                                                                                                                                                       302
                                                                                                                                                                                                                                                                                                                           (7
8
7
                                                                                                                                                                                                                                                                                                                                                                                                         330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   detCluAspAspLeuVallleSerPheGlnLeuMetLeuCysValLeuAspTyrPhelle 150
                                                                                                                                                               luAsnAspThrArg1!cllcCluVa!LcuCys!;sGluHisGluC;sAsn!!cAspClu_210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CuSertleCinAsmitheScrips.cai.cadsmaspasmitte PhenismetScripcu, 410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ssnlysAspl.cuAspAlaArgl.cuPhel.cuAspHisAsplysThrl.cuCln.thrAspScr
                                                                                                                                                    31ySerFroArgThrFroArgArgGlyGlnAshArgSerAlaArgIleAlaLysGlnLeu
                                                                                                                                                                                                                                                                                                                                                        leAspSerPheGluThrGluArgThrProArgLysSerAsnLeuAspGluGluValAsn
                                                                                                                                                                                                                                                                                                                                                                  7alTleProFroHisThrProValArgThrValMetAshThrIleGlnGlnLieuMetMet
  - 620
  Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        59A-33 (1-851) x BQ220275 (1-881)
98.30%
97.96%
33.12%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5', mRNA sequence.
BM475603
 nilarity:
Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
```

```
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SODO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q<sub>0</sub>
                                            9
                                                                                                                         ŝ
                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                  đ
                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ċ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="embryonal carcinoma, cell line"
//lab_inost="DHIOR (phage-resistant)"
//ab_inost="DHIOR (phage-resistant)"
//abi-inost="DHIOR (phage-resistant)"
//abi-inost-inomality (align-dr primed Average insert size 2.5 Kb. Library enriched for lull length closes and constructed by Life Technologies.
Note: this is a NIH_MGG Library.
                                                                                                                                                     Eukaryola; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                     1 (bases 1 to 1001)
NIH WOO http://mgc.nci.nih.gov/
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      157 ulauliysGluProTyrLysThrAlaVallleProIleAsnGlySerProArqThrProAr 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HITTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELlettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             117 rirpileihrPheiculcuAlaLysGlyGluValLeuGluMetGluAspAspLeuVall1 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               137 eserthedinieuMetLeudysValLeuAspTyrPheIleLysLeuSerProProMetLe 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     338 GCTCAAAGAACCATATAAAACAGTGTTATACCCATTAATGGTTCACCTCGAACACCCAG 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          177 qarq31761nAsnArqSerAlaArq116Ala17861nLeuGluAsnAsp13rArg11611-197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97 uThrdlnProSerSerfleSerThrGluIleAsnSerAlaLeuValLeuLysValSe 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      78 TyrAspValleuPbeAluLeuPbeSerLysLeu-GluArgThrCyscluLeulleTyrLe 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48 GLCCGAGTAALFGATAGCAGTAGAAAGTTGATAALGCTATGTCAAGACTGTTGAAGAAG 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cona Library Preparation: Life Technologies, Inc.
                                                                                                                                                                                         Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     http://image.lind.gov
Plate LLAM1226 Fow: t column: 04
Bligh quality sequence start: 17
High quality sequence stop: 734.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          288 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 indels:
                                                                                                                                                                                                                                                                                                                                                                                       Contact: Robert Strawsberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US US U26 459A 33 (1.851) x BM475603 (1.1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism-"Homo sapiens"
/db_xret "taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib-"NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone-"IMAGE:5575683"
                                                                                                                                                                                                                                                                                                                                                                                                                           Email: eqapbs-rāmail.nih.gov
Fissue Procurement: APCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      186 g
HM475603.1 GT:18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6.0% 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1349.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44, A7%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      178 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90.65%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30,638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1001
                                                                                                                Momo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Aliquiment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 corry Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SCHICE
                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred No.:
                                                                                                                                                                                                                                 KELERKENC'E
                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                          JUNEAU R.
                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                          TITLE
    VERSION
                                                                                                                                                                                                                                                                                                                                                                                       CMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NICIA
                                                                            Source.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
```

```
DKEZP31400816_rl 313 (synonym: htee2) Homo sapiens cDNA elone
ALSEZ91300816_57, mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Poustka,A., Wellenreuther,E., Mewes,H.W., Weil,E. and Wiemann,S.).
EST (Poustka,A., Wellenreuther,E., Mewes,H.W., Weil,E. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
Waryyota, Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
Mammalla; Entheria; Primates; Catarrhini; Heminidue; Hemo.
1. (bases 1 to 727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Heidelberg/Germany) within the cONA sequencing consortium of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Please contact the RZPD: Ressourcenzentrum, Heubnerweg 6, 14059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clone from S. Wlemann, Molecular Genome Analysis, derman Cancer
                                                                         257 qLeuPheLeuAspHisAspLysThrLeuGlnThrAspSerIleAspSerPheGlnThrG1 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            638 ATTATTTTGGATCATGATAAAACTGTTCAGACTGATTTTATAGACAGTTTTTGAAACACA 697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 277 nAigThiPivAigLysSerAsnLeuAspGluGluValAsnVallleProProHisThrPr 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 297 oValArq'thrValMetAsh'thr HeGInGInLaamet Met HelaanAshSer AlaSer As - 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              317 pGlaProSerGlaAsaLoulle-SerTyr-PheAsaAsuCysThrVal AsaProdysGl 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 878 AAAGCIAIACCGGAAAGAAGAGGTAAGGAATATAGGAATAACCTCCTTT1AAAGAAAAAA 947
                                                                                                                                                                                         217 sAsuPhelleProPheMetAsnSerLeuGlyLeuVallhrSerAsnSlyLeuFroSlaVa 247
                       198 GCGAGGTGAGAAQAQGAGTGCAGGATAGGAAAAGAAGTAGAAATTGATAGAATTAT 457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No sl sequence available.
This clone (DKEZp*1300816) is available at the KZPD in Berlin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Reseatch Center (DKFZ); Email s.wiemann#dktz heidelberg.de; sequenced by DKFZ (German Caneer Research Center,
                                                                                                                                                                                                                                                                                                          237 (CluAsnteuSertysArgTyrCluCluHetyrLeitysAsntysAspteuAspalaAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      336 uSerlleLeulysArg.....VallysAsplieClyTyrlle....PactysClutys
Berlin-Charlottenburg, GERMANY; Email: elone4rzpd.de.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Max-Planck-Institute for Molecular Genetics
thmostrasse 73, 14195 Berlin, Germany
Tel: +49-30 84131623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: poustka'mpimq berlin-dahlem.mpq.de
This is the 5' sequence of the clone insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AL597811
AL597811.1 GI:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         353 --PheAlaLysAlaValGly 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           938 TTCTGGCTAAAAGCCTGGGG 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Poustka A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                German Genome Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fax: +49-30-84131128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Department Lehrach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OKCAN: SM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
```

```
722 GATGAA 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                                                                                               ORGANISM
                                                                                          ACCESSION
                                                                                                        VERS :: N
KEYWORDS
                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                           JUNKNAL
                         RESULT 6
BQ223227
                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                         COMMENT
                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            싵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ö
                                                                                                     Corrado et a prightan Sianal Sfila, Siana Sfila, Oriente
                                                                                                                                                                                                                                                                                                                                                                                                                                                              886 Asmithrieu@ys3laArgieuleuSet3laHisProGlubeuGluHisIleileTrpThr 605
                                                                                                                                                                                                                                                                                                                                                                       506 LeuPheGlnHisThrLeuGlnAsnGluTyrGluLeuMetArgAspArgHisLeuAspGln 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     666 LeuileLysGludludutyrAspSerileIleValPheTyrAsnSerValPheMetGln 685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         686 ArgleulysThrAsnIleLeudlnTyrAlaSerThrArgProProThrLeuSerProIle 705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          482 AACATCIATATTTCACCCCCTGAAGAGGTCCATATAAAATTTGAGAAGGTGTGAAGACCACA 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       766 @lstystheGlatystLeastGlametValCysAsaSerAspargValLeatysArgScr 785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                802 GACGARCTTCCACAAAATAAATCAGATGGTATGTAACAGGGACGTGTGTCAAAAAGAAGT 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          786 AladisulyserAsnProfreqysProLoudysLysLeuArgFheAspIleGludlySer R05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 NAALCIASSIGICIIIICASIGIIIIA(AAAAAASIGIATOSSIIASCIIAECIIOSSIIA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   246 ThriysMetThrProArqSerArqIleLeuValSerIleGlyGluSerPheGlyThrSer
                   /organism="Homo sapiens"
/db_xref="taxon:9606"
/cleme="http:/p3!acmsts"
/cleme="http://ds.hien2]"
/dev.staqe="adult"
/lab_bost="pHlOR"
                                                                                                                                                                                                           Conservative:
Mismatches:
Indels:
                                                                                                                                198 t.
                                                                                                                                                                                                 Matches:
                                                                                                                                                                                    Length:
                                                                                                                                                                                                                                                      Saps:
                                                                                                                                                                                                                                                                             26-459A-32 (1-851) * ALEG7811 (1-727)
 Loration, Vousiitiers
                                                                                                                                 130 g
                                                                                                                                                                                4.43c 123
1254.00
99.59%
99.59%
                                                                                                                                 161 c
                                                                                                                                                                                                                                       28.68%
            727
                                                                                                                                                                                                                         Similarity.
                                                                                                                                 248 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HOS ASPULU 807
                                                                                                                                                                                                            Percent Similarity:
Best Local Similari
                                                                                                                                                                         SCO1755
                                                                                                                                                                                                                                       Query Match:
             SOUTTOR
                                                                                                                                                                                   Prod. No.:
                                                                                                                                                                      Aliqument
TEATHRES
                                                                                                                                            RISIN
                                                                                                                                                                                                                                                                                                                                                                                  <u>G</u>
                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ã
```

```
PQLILLITY NST US US NAY 2002 AGENV UPT_76+045 NIH_WPQ_22 Home sapiens cDMA clone IMA3E.6541563
                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
Eukaryota: Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia: Eutheria: Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alssee_type="embryonal carcinoma, cell line"

/lab_host="bH10B (phage-resistant)"
/note="crau." testis, Vector. pcMv Stoki5, Site_1. NotI)
Site_2 Sali, Cloued uniditectionally, cliqued primed.
Average insert size 2.5 kb. Library enriched for
full-length clones and constructed by Life Technologies.
Note: this is a NH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 880)
Nië MGC http://mgc.ncl.nih.gov/.
National institutes of Heaith, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120 Thr Photoculaca Na Lys Gly Glava Licu Glu Met Gla Spaspica Va 1 Heser Photos (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           160 GluproTyrLysThrAlaVallleProIleAseGlySerFroArgThrProArgGly 179
[[[]]]]]]]]]]]]]]]]]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100 ProSerSerSerIleSerThrGluIleAsnSerAlaLeuValLeuLysValSerTrpIle 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 140 GlufouMotLowGysValLeuAsFTyrFbelleLysLeuSerFroFroMetLeuLeuLys 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 ACATTTTTATTAGCTAAAAGGGGAAGTATTACAAATGGAAGATGATCTGGTGATTTCATTT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GTATTGTACTGTTCTGACAAATTGGAAAGGACATGTGAAACTTATATATTTGACACAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88 ValleuPheAlaLc.PhcScilysLeuGluArqThtCysGluLeuIleTyrLeuThrGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AL PRAGRATIONATATIONS FOR AN AND AND THE CONTROCTED CONTRACTION OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cDNA library Picparation life Technologics, Inc. cDNA Library Arrayed by: The LM A G R Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="IMAGE:6041563"
/clone_lib="NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-026-459A-33 (1-851) x BQ112227 (1-880)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref+"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: cgapbs-rémail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                          4.33e-121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1236.50
92.888
90.758
28.288
                                                                                                                , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     n
                                                                                                                                                                     BQ222227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                     human.
```

```
Linear EST 05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ВМАS4724
AGENOOMRT_640274: RIH_MG2_72 Homo suplems cDNA clone IMAGE_S528814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota: Metazoa; Chordata: Craniata; Verfebrata; Euteleostomi;
Mammalia: Eutheria: Primates; Catarrhini; Hominidae; Homo,
                                      200 LearlysLysGluffisHucysAsnileAspSluValLysAssNalTyrPheLysAssPhe 219
                                                                                                                                                                                                                                    240 Journallysarglytchiclarifolythoulysaspitysaspituaspalaargikurhti 259
                                                                                                                                                                                                                                                                                                                                           481 CTTTCTAAACGATAGGAAGAATTFATGTTAAAATAAAGATCTAGATGGAAGATTATTT 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601 CTACGAAAAAGITAACITEGATGAAGAGGGAATGTAATTGCTGGAGACACTGCAGTTAGG 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300 ThrValMetAshThrTLoGInGInLeuMetMetTleLeuAsnSerAlaSerAspGln-Pr 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661 ACTULLALGANDACIALCCANCALLIANIGATETTANATCCAGGANGIGANCANCE 720
                                                                                                                                                                                                               220 HOPTOPBOMOTASINSCLICUGI (MONATTHI SCLASIIC) (MONATGINASII - 239
                                                                                                                                                                                                                                                                                                                                                                                      260 LeudspilisAspLysThrLeudlnThrAspSerIleAspSerPhedluThrGlnArqThr 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          280 ProArdLysSerAsnLeuAspGluGluValAsnVallleProProHisthrProValArg 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NIH MOC bitp://mgc.nci.nih.gov/.
National Institutes of Health, Mammallan Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LysGluLysPhe 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               chan Library Preparation: Life Technologies, Inc. chan Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tound through the L.M.A.G.E. Consortium/LLNL at: bttp://mage.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone lib "NtH_MGC_72"
/tissue_type="melanotic melanoma"
/lab host="DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LysArqValLysAspileGlyTyrilePhe----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Plate: LLAM12206 row: e column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               lissue Procurement: AICC/DCID/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
Email: cqapbs r≅mail.nih.qov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "edajani alle III alle sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      High quality sequence stop: 647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db-yrof="faxon:9606"
/olono="IMAGE=5529814"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local ion/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RM453724.1 GI:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 845)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5', mRNA sequence.
BM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Adb yrot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8.35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOUTTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PEGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ANTESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HM45 1724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FFATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MMENI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SHOOT
                                          5
                                                                                                                                                                                                                                                                                                                                         ÷
                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                 =
                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                            5
                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                    \frac{1}{2}
```

```
/note-"organ: skin; Vertor: pCMV SPORT6, Site_1: Not1;
Site_2: Sall; Cloned uniditectionally. Frimer: oliqo dr.
Average insert size 2 kb. Library constructed by Lite
technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            473 LeuGluArqCysGluHisArqIleMetGluSerLeuAlaTrpLeuSerAspSerProLeu 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  513 CysProLeuAsnLeuProLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerfro 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      533 ValArqSerProLySLySLySGlySerThrThrArqValAsnSerThrAlaAsnAlaGlu 552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        503 Leuser Gladis Prosbake of addis the Leufer Influencia for the formal for the formal formal formal formal formal formal for the formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal formal form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       673 AspScrilelleValPhelyrAsnScrValPheMetGlnArqLeuLysthrAsnileLeu 692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        493 PheAspheulleLysGInSerLysAspArgGluGlyProThrAspHisLeuGluSerAla 512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    188 GTAAGATCTCGAAAGAAAAAAGGTTCAACTACGCGTGTAAATTCTACTGCAAATGCAGAGCA47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      368 CTGTCTGAGCACCAGAATTAGAACATATCTGGACCTTTTCCAGGACACCTGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               428 AATGAGTATGAACTCATGAGAGAGAGACATTTGGACCAAATTATGATGTGTCCATGTAT 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             633 GlyIleCysLysValLysAssIleAspLeuLysFheLysIleIleValThrAlaTyrLys 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        693 GlnTyrAlaSerThrArgProPro****ThrLeuSerProIleProHisJle ProArgSe 711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  668 CAGTATGCTTCCACCAGGCCCCCTACCTTGTCACCAANTACCTCACATTTCCTCAAG 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               553 ThrGlnAlaThrSerAlaPheGlnThrGluLysProLouLysSerThrSerLeuSerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      653 AspLeuProHisAlaValGlnGluThrPheLysArqValLeuIleLysGluGluGluTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            573 PheTyrLysLysValTyrArqLeuAlaTyrLeuArqLeuAsnThrLeuCysStuArqLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     613 AsnGluTyrGluLeuMetArqAspArqHisLeuAspGluTleMetMetCysSerMetTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  711 rProTyrLys -- - PheProSerSerProLeu Argilefro GlydlyAsu
                                                                                                                                                                1 of hers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
                                                                                                                                                            244.1
                                                                                                                                                                                                                                                                                                                                                      Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                                                                                                         Longth:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-026-459A-33 (1-851) x HM453724 (1 835)
                                                                                                                                                            137 G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             727 HefyrlleScrireLeutys 733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        788 ININITITIONACCCCCTGGAA 809
                                                                                                                                                                                                                                                                                                             4,4c-118
1208,00
92,918
91,048
                                                                                                                                                            210 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27.638
                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
                                                                                                                                                            254 a
                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                                         ored. No.:
                                                                                                                                                            HASE COUNT
                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
```

```
linear EST 05-PEB-2002
                                                                                 BM450031 1023 bp mPNA linear EST 05-FPB-2000
AGFNY-HPT-6393841 NFH_MGC_72 Hemo sipilas (GNA clube LMACP 5528033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia: Eutheria: Primates: Calarrhini: Heminidae; Homo
1 (bases 1 to 1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA Library Preparation: Life Technologies, Inc.
clos Library Arrayed by: The L.M.A.C.F. Consortium (LLNL.)
INA Sequencing by: Apencourt Bloscience Corporation
Close distribution: MGC close distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NIH-MGC http://mgc nci nih gov/
National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        454 | Hisalava) ChoquithroborysArqVa | DogthelysGluG | 5GUTYTASpSert | 6 | 675 | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI | HILLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62 CATGCTGTTCAGGAGACATTCAAACGTGTTTTGATCAAAGAAGAGGAGTATGATTGTATT 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              695 IleValPheTyrAsnSetValPheMetGlnArgLeuLysThrAsnIleLeuGlnTyrAla 695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                596 SerThrArgProProThrLeuSerProlleProHisIleProArgSerProTyrLysPhe 715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 736 TyrtysTlasardluGlyLouDriThrProThrLysMetThrProArdSeiArgIleLeu 755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tound through the I M A G E Consortium/LLNL at: http://image.llnl.gov
Plate: LLAM12204 row: d column: 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
Email: cgapbs:r@mail.nih.gov
Tissue Procurement: ATCC/DGTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism-"Homo sapiens"
/db_xref-"taxon:9606"
/clone-"IMAGE:5528037"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-126-459A-14 (1-851) X BM450031 (1-1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stop: 643.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_lib-"NIH_MGC_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                       BM450031.1 GI:18499071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.34e-107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1111.00
100 00%
100.00%
25.41%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1999)
                                                                                                                                                      mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1023
                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hest Tocal Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  æ
                                                                                                                                                                                                  BM450031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity.
                                                                                                                                                                                                                                                                                                                        human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Aliquant Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ં
ુ
                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
                                                                                                                     NOT UNITED
                                                                                                                                                                                                                                                                                                                                                             -- RCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HASE COUNT
RESULT B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            I SURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LNEWMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NICHA
                                                                                                                                                                                                                                                                                                                CREEK
                                                                                     SILS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
```

```
Mus musculus
Edkaryola, Melakua, Chordata, Craniata, Vertebrata, Esterieostonni;
Edkaryola, Melakua, Chordata, Craniata, Vertebrata, Esterieostonni;
(basel to 914)
Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
Schellenkry,K., Steptoe,M., Le,M., Martin,J., Morris,M.,
Schellenkry,K., Steptoe,M., Tan,F., Underwood,K., Moore,R.,
Theising,B., Wylie,F., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mote_"Vector: pT7T3D-Pac (Pharmacia) with a modified booklinker: 1st strand cDNA was prepared from mammary bland tissue from a lactating female, and was then primed with a Not I - oligo(dI) primer. Bookle-stranded chan was lighted to Rob NI adaptors (Pharmacia), divested with Not I and cloned into the Not. I and Eco NI siles of the modified pT713 weeld. Library is normalized. Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 27-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         vW54a64.11 Scares_nammary_gland_NMiMC Mus musculus civià cione
IMAGE:147598 S' similar to qbiMIS400 RETINOHIASTOMA-ASSOCIALED
PROTEIN (HUMAN), qb.M26331 Mouse retinobidatuma susceptibility
protein (MOUSE);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fice through LLNL ; contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                        796 LystysLeuArqPheAspileGluGlySerAspGluAlaAspGlySerLySHIsLeuPro 815
                                                                                                                                                                                776 CysAsnSerAspArqValLeuLysArqSerAlaGluGlySerAsnFroProLysProLeu 795
                                                                                                                                                                                                                                     422 TGTRAACAGGGACCGTGTGGTFCAAAGAAGTGGTFGAAGGAAGCCTGCTAAAGCAGTG 481
                                                                                                                                                                                                                                                                                                                                            816 ClyGluSerlysPheGlnGlnIysLeuAlaGluMetPhrSerThrArgThrArgMetGln 835
                                                                                                                                                                                                                                                                                                                                                                                                                                                   542 GGAGAGTCCAAATTTCAGCAGAAACTGGCAGAAATGACTTCTACTCGAACACGGAATGCAA 601
Confact, Maria M/Mouse EST Project
WashU-HMH Mouse EST Project
WashIngton University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, Mo 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         836 LysGlnLysMetAsnAspSerMetAspThrSerAsnLysGluGluLys 851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib-"Soares_mammary_gland_NMLMG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mPNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -28ml3 rev2 ET tran Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /sex-"female (lactating)"
/tissue_type="mammary gland"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism-"Mus musculus"
/db_xrel-"taxon:10090"
/clone-"IMAGE:1247598"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  914 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               High quality sequence stop: 422. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This close is available toyalty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /lab_host_"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA763411.1 GI:2813158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tel: 314 286 1800
Fax. 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGI:661286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sed primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AA753411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA763411/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POCUS
                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                             ŝ
```

was constructed by Hento Soares and M. Fatima Bonaldo. 178 c. 217 q. 261 t. | others 4.9 LeutysArdValtysAspileClyTyrilePhetysClutysPheAlatysAlaValGly 358 299 ArgThrValMetAsuThrIleGluGluLeuMetMetIleLeuAsnSerAlaSerAspGln 318 797 FOGOTIGETITEOGAACTIATCCAACAATTIATITITGIGATTITIAAACTGGGCGAATGAGGGC 738 419 ProSerGluAsnLeulleSerTyrPheAsnAsnCysThrValAsnProLysGluSerIle 338 2.37 COCTCAGAATNTCTGTT-TCCCTCTGTAATATTGCGCCGGGTAACCCCAAAGAAATFCCC 679 69 GluGlyCycVilGluIleGlySerGlaArqTyrLySLeuGlyValArqLeuTyrTyrArg 378 522 COAGGEGEGEGEGEAGGAGTAGAGGATATAAACTTTGAGTGGGATGGTATTAGGGT 563 199 LeuteuAsnAspAsn HePheHisMetSerteuteuAlaCysAlaLeuGluValValMet 418 419 AlaThrTyrSerArgSerThrSerGlnAsuLeuAspSerGlyThrAspLeuSerPhePro 438 439 TrplleLeuAsnValLeuAsnLeuLysAlaFheAspFheTyrLysValIleGluSerPhe 458 482 TGSATTCTGAAGGIACTTAATTTAAAAGCCTTTGATTTTTACAAAGTGATTGAAAGTTTT 323 422 ATCANAGEGGANGCANCITGACANGAGANATGATANANGATITAGANAGATGTGAGCAT 263 479 ArqlleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysGln 498 499 SertysAspArqGluGlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuPro 518 519 LouginAsnAsnHisihiAlaAlaAspMetTyrLeuSerProValArqSerProLysLys 538 3.9 LysellySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAla 558 259 PhetamAspHisAspLysThrLeuGluThrAspSerIleAspSerPheGluThrGlnArg 278 914 TITITGGALGCAGAAIAAAAGGLCGGAGGLGI - FCCLTTAGGCCFTITITAAAAGGGGGG 857 85 AGAACHTECACHACAGGGGAAATEGGGGGAAATAAGAGAGAGAGAGAGGGTCAGGC 26 279 Thr ProArgLysSerAsnLeuAspG1uG1uVa1AsnVa111eProProHisThrProVa1 Conservative: Mismatches: Indels: Matches: Length: US 09 026 459A 44 (1 851) x AA763411 (1 914) 7, 49e-102 1056, 50 82.14% * 1. 4. 1. E 24.17% E 157 Best Loval Similarity: Percent Similarity: Aliqument Scores: Querry Material AASE COUNT RICIN = ŝ 3 â Ę 3 3 = 3 2.5 3 S 1 5 5 ŝ 3 ÷ S 5 $\frac{2}{3}$ > 0 3 ÷ 2 ŝ ò

```
was primed with a Not1-oliqu(df) primer. Five prime end enriched, double-stranded cDNA was digested with Not 1 and eloned into the Not 1 and Eco RV sites of the pCMVSPORT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      vector. Library was normalized. Library was constructed by Lite Technologies. Contact: Fend Library in Library and Technologies. Contact: Fend Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note-"organ, brain, Verton, poMVSPoki 6, ist strand cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                      ALS63757 LTI_NTL001_NBC4 Homo sapiens con clone csoppon77A05 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      183 SeralaargilealalysGloLeuGluasnaspihrargileiledluValleuGystys 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         163 LysthrAlaValileProlleAssdlySerProArqThrProArqArqArq1y0lbAsbArg 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          731 AGTGCACGGWTAGCAACAAYTAGAAATTGATACAAGAATTATTGAAGGTFCTCTGTAAA 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               671 GAACATGAATGTVATATAGWEGAGGTGAAAAAGTTTWTT CAAAAATFTTAFACGTTTF 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      223 MetAsnSerLeuGlyLeuValThrSerAsnGlyLeuProGluValGluAsnLouSerLys 24.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genoscope - Centre National de Sequencage
BP 191-91006 EVEY cedex - France
Email: segrefagenoscope.cns.fr, Web : www.genoscope.cns.fr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 203 CluHisGluGysAsnlleAspCluVallysAsnValTyrPhetysAsnPhetleProPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full length cDNA libraries and normalization Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /tissue_type="neuroblastoma_cells"
/lab_host="DH10k"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                   HENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="CSODDOO7yA05"
/clone_lib="ETT_NFLOO1_NBC4"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JS-09-026-459A-33 (1-851) x AL563757 (1-792)
                                                                                                                                                                                                                                                   dq 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xre1-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
559 PheGlnThrGlnLysProLeuLys 566
                                       25 TTCCATACTCAGAAGCCATTGAAA 2
                                                                                                                                                                                                                                                                                                                                                                                                           AL563757.1 G1:12913464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.65e-100
1043.00
84.53%
81.89%
23.86%
                                                                                                                                                                                                                                                                                                                prime, mRNA sequence.
AL564757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 792)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity:
                                                                                                                                                                                                                                          A1.563757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .:
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                   AL563757/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                            RESULT 10
                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOHENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score:
                                                                                                                                                                                                                                                   SEC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>q</u>
```

```
AL599633 605 pp mRNA linear EST 14-AUG-2001
DKE7P214P042 rl 313 (synchym: bloc2) Homo sapions cDNA clone
DKE7P313P092 57, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Am Klopferspits 19a D 92152 Martinsried, Germany
This is the 5' sequence of the clone insert
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DREZ); Email s.wiemannedkiz heidelberg.de;
sequenced by MMFZ (Biomedical Research Center at the Charite,
Herlin/Germany) within the GDNA sequencing consertium of the German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
Eukaryota: Motaroa: Chordata: Craniata, Vortobrata, Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No.s1 sequence available.

This clone (DKE2) 19P692) is available at the E2P5 in Retlin Please contact the R2P5 - Resourcementum, Heubnerweg 6, 14059 Berlin-Charlon/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 605)

Koehrer,K., Beyer,A., Mewes,W., Weil,B. and Wiemann,S.

EST (Koehrer,K., Rayer,A., Mewes,H.W., Weil,R. and Wiemann,S.)

Unputlished (1999)
244 ArdlyrGluGlulleTyrLevLysAsnLysAspLeuAspAlaArqLeuPheLeuAspHis 262
                                                                                  26.1 AsplysthricudinthrAspSerlicAspSerPheGluThrGluArgThrProArgLys 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28 * SerAsnLeuAspGluGluValAsnVallLeProProHisThrProValArgThrValMet 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           303 AsnThrIleGlnGlnLeuMet.Met.IleLeuAsnSerAlaSerAspGlnPtoSerGluAsn 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              42. LeuilleSerTyrPheAsnAsnCysThrValAsnPreLysCluSerIlleLeulysArgVal 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     411 YEGITITCYIWITTTIACGACTGCACAGTGAATCCAAAAGAAAGTATACTGAAAAAGG 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  251 AAGGALWIKGGATACWIYTTTAAAGAGAATTTGCTAAAGCTGTGGGACAGGGTTGTGTC 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                664 GluIleGlySerGlaArqTyrLysLeaGly--ValArgLeaTyrTyrArqValMetGluS 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          482 crMctLcuLysSerGluGluGluArgLcuSerfleGlnAsnPheSerLysLcuLcuAsn- 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               102 AspasnilePheHisMetSerLeuLouAlaCysAlaLeuGluValValMetAlaThrTyr 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          131 CCATGUTTTATTCAGAAGAAGACGACTATATCCATTCAAAAITIIMBCACAACTTCAGAATS 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (GA, B) = \{\{\{1,1\}, \{1,1\}\} \in \{1,2\}, \{1,1\}\} \in \{1,1\}, \{1,1\}\} \cap \{\{1,1\}, \{1,1\}\} \cap \{1,1\}\} \cap \{1,1\} 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mammalia; Butheria: Primates: Catarrhini; Heminidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Al.599633.1 G1:15162921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Kochrer K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genome Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            422 SerArqSer 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11 GCAGTAAGT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A1.599633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Salw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYW FIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESTRICT: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEFEKENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AL5996.53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IIII.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NIMM
                                                                                                                                                                                                                                                                                                                                                                                                                                         î
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
```

/organism-"Homo sapiens" /db_xret "taxon:9606"

1. .605

SCHICC

FEATTRES

```
велигия Innear EST 12-JUN-2006
Вед крем42 децененей4-вене Efre42 Rome wapiens CDNA, mENA sequence.
BE082846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata; Euteleostomi:
                                                                       /hote="Vector, pTriplEx2; Site_1: StilA; Site_2: SfilB; cDNA-collection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        198 GluValLeuCysLysGluHisGluCysAsnIleAspGluValLysAsnValTyrPheLys 217
                                                                                                                                                                                                                                                                                                                                                                                                                   218 AssibhelloProPhoMetAssiSerLeuGlyLeuValThrSerAssiSlyLeuProGluVal 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 GAAAATCTTTCTAAACGATACGAAGAATTTATCTTAAAAATAAAGATCTAGAIGCAAGA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                258 LeuPheLeuAspHisAspLysThrLeuGlnThrAspSerIleAspSerPheGluThrGln 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    278 ArgThrProArgLysSerAsnLeuAspGluGluValAsnVallleProProHisThrPro 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 AGAACACCACGAAAAAAGTAACCTTGATGAAGGGGGTGAATGTAATTCCTCCACACACTCCA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        298 ValArgThrValMctAsnThrileGinGinLeuMetMetileLeuAsnSerAlaSerAsp 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361 CAACCITICAGAAATCTGATTTTCCTATTTTAACAACTGCACAGTGAATCCAAAAGAAGT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481 GGACAGGGTGGTGGTGGAAATTGGALCACAGGGATACAAACTTGGAGTTCGCTTGTATTAC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 378 ArgValMetGluSerMetLeuLysSerGluGluGluGluArqLeuSerIleGlnAsnPheSer 397
                                                                                                                                                                                                                                                                                                                                                                               1 GAAGTTCTCTCTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                      338 TleLeuLysArgValLysAspileGlyTyrilePheLysGluLysPheAlaLysAlaVal
/clone-"DKFZp313F092"
/clone_llb="313 (synonym: hlcc2)"
/dev_stage="aduit"
                                                                                                                                                                                                   Matches:
Conservative:
                                                                                                                                                                                                                                       Mismatches:
                                                                                                             179 t
                                                                                                                                                                                   Length:
                                                                                                                                                                                                                                                          indels:
                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                           US-09-026-459A-33 (1-851) x AL599633 (1-605)
                                                                                                             106 9
                                                    /lab_host-"DH108"
                                                                                                                                                                                 4.83e-100
1037.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BE082846.1 C1:8473151
                                                                                                                                                                                                                   100.00%
100.00%
                                                                                                                                                                                                                                                      23.72%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human.
                                                                                                                                                                Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    398 Lys 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601 AAA 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST
                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                    ..
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N. .. I T. M. I. J. J. J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BE082846/C
                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                ORIGIN
                                                                                                                                                                                   pare
                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 â
```

```
90
                                                                                                                                                                                                                                                                                     â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90
                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               급
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           from ORESTES PCR (U.S. Letters Patent Application No. 196-716 - Ludwig Institute for Cancer Research) profiles into the puc 18 vector. Reverse transcription of tissue minh and cDNA amplification were performed under low stringency conditionation were performed under low a stringency conditionation.
                                                                                                                                Naqai, M.A., da Silva, W. Jr., Zaqo, M.A., Bordin, S., Costa, F.F.,
Forbithan, G.H., Carvolho, M.E., Matskina, A. & Baia, G.S., Simpson, D.H.,
Frunstein, A., devilveira, P.S., Burber, P., Joingeneel, C.V., O'Haro,
M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This sequence was derived from the FAPESP/CLOP Human Canner General Project. This entry can be seen in the following URL (http://www.lidwia.ra/lifesrafprs/gethini.pl/fil.at.p/mc_RTe42_210_200~014_006414-2000-02-21644-1)
                                       1 (bases 1 to 694)
Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Znote-"Ordan: breast: Vector: pur18; Site_1: Smal; Site_2: Smal; A mini:library was made by cloning products derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                         Shotqun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 429 ASOCTYSTEATA SARETTE TO WELLT THE CONTINEAT TO A LOSSASETTE CONTINE THE SASTE TO A LABORATED THE SASTE AND A LABORATED THE SASTE AND A LABORATED THE SASTE AND A CONTINEAT CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA CONTINEATA C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    449 PhetysGlutysPheAlaLysAlaValGlyGlnGlyCysValGlufleGlySerGlnArq 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      517 ILLAAAGAGAALITGTTAGAGTGTGGGACAGNITGTGTGGAAATTGGATGAGAGGGA 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              557 IACAAASITGGAGTIGGCTIGTATIACGGAGIAAIGGAATGCATGCIIAAAICAGAAGAA 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       889 GinArglauser HeclinasuPheserLyslautenasnaspasnflePheHisMetSer 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              409 LeuteuAlaCysAlaLeuGluValValMetAlaThrTyrSerArgSerThrSerGlnAsn 428
Mammalia: Eutheria: Primates: Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3441-4496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \texttt{Mismatches:}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ludwig Institute for Cancer Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09 026 459A 34 (1 851) x BE082846 (1 694)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High quality sequence stop: 669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        High quality sequence start: 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xret "taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Laboratory of Cancer Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: asimpson dudwig.org.br
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Locat ion/qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zelone_lib="Br0642"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Adov_stage "Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Seq primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4, 4e, 99
1040,00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lel: +55 11 2704922
Fax: +55 11 2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94.958 23.568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    855.196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6.14
                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence tads
                                                                                                                                                                                                                                                                                                                                 Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rest Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Confact :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2020205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Brazil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INDEA 35VE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fred. No. :
                                            REFERENCE
                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOHENAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ξ. N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ING WWO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NICIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ę
```

```
1 (bases 1 to 623)
Mellon, D., Meadows, A., Clitton, S., Hillier, L., Marra, M., Pape, D., Wylke, T., Martin, J., Bistain, A., Schmitt, A., Theislind, B., Ritter E., Ronko, L., Bonnett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, K., Tsagarcishyili, K., Williams, T., Jackson, Y. and Howers, Y. Washu-Harvard Panereas ESI Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14 MAR 2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA sequencing by: Washington University Genome Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          For information on obtaining a clone please contact: Juliana Brown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This sequence now available from the IMAGE consertions for clone orders contact: infodimage.llnl.gov
Seg primer: -40RP from Gibeo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note-"Organ: Pancreas: Vector: pSPORTE: Site 1: Not 1;
Site_2: Sal 1; Library constructed using SuperScript
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tallh09.yl Human Pancreatic Islets Homo sapiens condition to MARK ZIMAGE:5638049-5' similar to qb:MI5400 RELINGHIASTOMA ASSOCIATED PROTEIN (HUMAN): qb:M26391 Mouse retinoblastoma susceptibility protein (MOUSE):, mRNA sequence.
                                                                                                                                                                                                                                                                Plasmid Library kit (Life Technologies), coNA made by
                        449 PheAspPheTyrLysValileGluSerPheHeLysAlaGluGlyAsuLeuThiAraGlu 468
                                                                                                                                               469 MetileLysHisLeuGluArqCysGluHisArqIleMetGluSetLeuAlaTrpLeuSer 488
                                                                                                                                                                                                                                                                                                                                                  489 AspSerProLeuPheAspLeulleLysGlnSerLysAspArqGluGlyProThrAspHis 508
                                                                                                                                                                                                                                                                                                                                                                                                         197 GATTCACCTITATIGAICTIAITAAACAATCAAAGGACGGAGAAGGACAAACTGAICAC 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   509 LeuGluserAlaCysProLeuAsnLeu-ProLeuGlnAsnAsnHisThrAlaAlaAspMe 528
429 LeuaspserdlyThraspleuserPheProTrpHeLeuashValleuashLeulysala 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Douglas Melton, Klaus B. Kaestner, & Biroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    528 (Tyr LeuSer ProValArqSerProLysLysLysS)yserThrThrArqVal 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Harvard University, Howard Hughes Medical Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Libraries were constructed by Dr. Douglas Melton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib="Human Pancreatic Islets"
/tissue_type="Islets of Langerhaus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  m KNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: dmelton@biohp.harvard.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          High quality sequence stop: 430.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zelone-"IMAGE: 5638049"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Endocrine Pancreas Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /dev_staqe-"Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /lab_host -"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                    (brown@fas.harvard.edu)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AWS83181.1 GI:7260125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tel: 617-495-1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fux: 617-495-8557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MA 02138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AW58 4181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOUFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           THIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
```

```
EST 27-JAN-1998
oliqo-dT priming. Size-selected by column tractionation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           vw54h0l.rl Soares_mammary_gland_NMLMS Mus musevilus ethna elec-
lMadE:1247665 5' similar to gb:M15400 RETHORHASTOMA ASSOCIATED
PROTEIN (HUMAN): qb:M26391 Mouse retinoblastoma susceptibility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             293 OPFORISTARFROVALARGIALVALMetAsnThrIleGinGlnLeumetMetIleTeuAs 313
                                                                                                                                                                                                                                                        253 pl.cuAspAlaArgl.cuPhel.cuAspHisAspLysThrL.cuGlnThrAspScrllcAspSc 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                               313 nSerAlaSerAspClnProSerCluAsnLeulleSerTyrPheAsnAsnCysThrValAs 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   eAlaLysAlaValGlyGlnGlyCysValGluIleGlySerGlnArgTyrLysLeuGlyVa 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       483 TGCTAAAGCTGTGGGACAGGGTTGTGTCGAAATTTGAYCACAGGGATACAAACTTGGAGT 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 37.3 JArgLeufyrTyrArgValMetGluSerMetLeuLysSerGluGluGluArgLeuSerfl 393
                                                                                                                                                                                                                                                                                                                                                                                      233 yLeuProGluValGluAsnIPGSFrLycArgTyrGluGlufleTyrLeuLysAsnLysAs 253
                                                                                                                                                                                                                                                                                         3 ACAAGAATTATTGAAGTTCTCTGTAAAGAACATGTAATTAAATATAGATGAGGTGAAAAAT 62
                                                                                                                                                                                                                                                                                                                        2.4 VallyrPhetysAsnPhetLeProPheMetAsn+SerLeuGlyLeuValThrSerAsnOl
          average insert size 1.08 kb. Primary library, unamplified."
                                                  1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                              Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mKNA
                                              186 €
                                                                                                                             Matchog.
                                                                                                                Length:
                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      u9 226-459A-33 (1-851) x AW583181 (1-623)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein (MOUSE);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            871 bp
                                              109 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA763485.1 GI:2813232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   394 eGlnAsnPheSerLysLeu 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              603 ICAAAAIITTAGCAAACTT 621
                                                                                                              8.78e-98
                                              93 C
                                                                                                                             1016 00
                                                                                                                                            820.86
                                                                                                                                                             97.108
                                                                                                                                                                            23.248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             house mouse.
                                                                                                                                                             Similarity:
                                                  244 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA763485
                                                                                                                                              Percent Similarity:
                                                                                                 Aliqument Scores:
                                                                                                                                                                           mery Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NOTHINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -- RGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA76 1445/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTESKION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWURDS
                                                               KICLK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SCORCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20,50
                                                                                                                                                             Hest
                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                    <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ä
```

```
Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,L.,
Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptue,M., Tan,F., Underwood,n., Moore,B.,
Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CINA Was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note-vector pTTT3D-Pac (Pharmacia) with a modilied polylinker; 1st strand cDNA was prepared from mammary Jud.d Lissue from a lactating female, and was then primed with a Not I - oligo(dT) primer. Double stranded cDNA was ligated to Ecc R: adapters (Pharmacia), discasted with Not II and cloped into the Not I and Eco PI sloss of the II and cloped into the Not I and Eco PI sloss of the was constructed by Bento Soares and M. Fatima Bonaldo."
Manufalia: Eutheria: Rodentia: Sciurognathi: Muridae: Murinae: Mus.
1 (bases 1 to 871)
                                                                                                                                                                                                                                                                                                                                                                                     This clone is available regulty from through Lim. , contact the IMAGE Consortium (into@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        298 alArqThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAsp; 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               338 hetentysArgValtysAspiteSlyTyriLePhetysClutysPhoAlutysAluValC 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           358 lygladlygysValglulleGlySerglaArgTyrLysLeuGlyValAraLeuTyrTyrA 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           279 ThrProArglysSerAsn -- LeuAspCluGluValAsnValIleProProHisThrProV 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      803 TPG-GCCGTTTTTGATACTACTCCACCATTAGGGGGGTTTTTAATTTCCCCGAGIAICA 745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               318 InProSerGluAsnLeuIleSerTyrPheAsnAsnCysThrValAsnProLysGluSerI 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rqValMetGluSerMetLeuLysSerGluGluGluArqLeuSerIleGlnAsnPheSerL 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Washurihum Mouse Est Project
Washington University School of MedicineP
Washington Park Parkway, Box 8501, St. Louis, Mr 6,3168
Tel: 314 286 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone_lib="Scarcs_mammary_gland_NMLMG"
/sex="female (lactating)"
/tissuc_type="mammary gland"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             871
216
17
53
53
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Seq primer: -28ml3 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches:
                                                                                                                                                                                            Unpublished (1996)
Contact: Marra M/Mcuse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism-"Mus musculus"
/db_xret-"taxon:10090"
/clone="IMAGE:1247665"
                                                                                                                                                                     The WashU-HHMI Mouse EST Project.
                                                                                                                                                                                                                                                                                                                                                            Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence stop: 495.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-026-459A-33 (1-851) x AA763485 (1-871)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3.02e 97
1013.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            74.48%
23.17%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        80.348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .871
                                                                                                                                                                                                                                                                                                                                        286
                                                                                                                                                 Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                             MGI:661353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                242 a
                                                                                                                                                                                                                                                                                                                                      Fax: 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ..
O
                                                                                                                                                                   TITLE
JOURNAL
                      REFERENCE
                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ď
```

```
EST 13-FEB: 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  602364278F1 NIH_MGC_90 Homo sapiens cDNA clone IMAGE:4472611 5',
                                                                   CHNA Library Preparation: Lite Technologies, Inc.
CARA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genemics, Inc.
Clone distribution: MGC clone distribution information can be
564 GTGTGATGANAT/CGTG/TTAAATCAGAAGAAGGATTTGTGTCCATTCAGAATTTTAGCA 505
                                              998 ystantanAsnAspAsn11cebaHisMotSertantanAlacysAlateuGtuVa1Va1W 418
                                                                                                                                            418 etAlaThrTyrSerArqSerThrSerGlnAshLeuAspSerGlyThrAspLeuSerPheP 438
                                                                                                                                                                                             385
                                                                                                                                                                                                                                              438 refrettetenAsnValtenAsnLeutysAlaPheAspPhelyrtysValt1eGluSerP 458
                                                                                                                                                                                                                                                                                             884 OGFGGATFCTGAAGGTACTTAATTTAAAAGGCTTTGATTTTTACAAAGTGATTGAAAGTT 325
                                                                                                                                                                                                                                                                                                                                              458 holletysaladinglyasnieurhrarqGlumetHelysHisheuGluarqCysGluH 478
                                                                                                                                                                                                                                                                                                                                                                                                                                              478 isArqIleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysG 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             264 ATCGARICALCGALCCCLICCALGGCILICAGALTCACCTILATITGALCTCATTAAGC 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            498 InSertysAspArgGluClyProThrAspHistonCluSerAlaCysProteuAsnLeup 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   204 ACTOMACIAN CHARACT CATANOTICANOTICATOR CONTROL 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            518 rolandinAsnAsnHisthrAlaAlaAspMetfyrLauSerProValArgSerProLysL 538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              538 ystysGlySorthrTbrArqValAsnSerTbrAlaAsnAlaGluTbrGlnAlaTbrSerA 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         l (bases 1 to 922)
NIH MGC http://mgc.nci.nih.gov/.
National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissur type="adenovarcinoma, rell line"
/lab_host="DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  found through the I.M.A.G.E. Consortium/LLNL at: bitp://image llet gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             THENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Plate: LLAM10293 row: 1 column: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Confact: Robert Strausberg, Ph.D.
Email: eqapbs r'mail.nih.gov
Tissue Procurement: AFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="NIH_MGC_90"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                455 trb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High quality sequence stop: 633.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="!MAGE:4472611"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            558 TaPheGInThrGluLysProLeuLys 566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27 COTTPORTACTONGNASCONTEGNAS 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HG253543.1 GT:12763359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db/xret
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HG253543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143.25 454 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3011111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A CESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ELECTRICAL SE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PATIENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESIDEA 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H3253543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOIKCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50000
                                                 5
                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
```

```
Zhote-"orqan: liver; Vector: pCMV Spokts; Site 1: Not1: Site_2: Sall: Cloned unidirectionally; oligo dT primed Average insert size 1.7 kb. Library enriched for full length clones and constructed by Lite Lechnologies. Note: this is a NH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           821 Clastalystacaalactametthracribrarathaaram.totalysathaysmetasm 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 GCATIG GACCAAATIAIGAIGIII COAGIATAGGAFAIGAAAGAGAAGA 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      357 GATTCCTGGAGGGAACATCTATATTTCACCCTTGAAGAGTCCATATAAAALTTCAQAAGG 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       801 princindlyseraspoinalaasp-GlyserlysHis-LouProGlycluserlysPhe 820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   596 TATTGAAGGATCAGATGAAGCAGAATGGAAGTAAACATCCTCCCAGGAGAGTCCAATCT 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     602 IleiletrpthrieuPheGlnHisThrieuGlnAsuGlu TyrGluLeuMetArqAspAr 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         621 gHisLeuAspGlnileMetMetCysSerMetTyrGlyfleCysLysVallysAsmileAs 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      641 piculysPhetysHeHeValThrAlaTytLysAspiculYoHisAlaValGlnGlnTh 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              681 rVaTPheMetGlnArgLeuLySThrAsniTeLeuGlnTyrAlaSerThrArgProProTh 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 761 rPheGlyThrSerGluLySPheGlbLySTLeAsnGlnMetValCysAsuSerAspArdVa 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         537 GCTCAAAAGAAGTGCTGAAGGAAGCAA-CCTCCTAAAACACTGAAAAAACTACTTTGA 595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HITTELLE HITTELLE HELLE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               741 ylouproThrProThrLysMetThrProArqSerArq11eLouValSer11ed1ygluSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7 x =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        841 AspSerMetAspThrSerAsnLysGluGluLys 851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       716 GGAAGCTGGGTAGCTFCAPACAGGGAAAGAAAG 748
                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                                                                                                            Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-026 459A 33 (1 851) x BC254543 (1 922)
                                                                                                                                                                                                                                                                                                                                                                                                                               1004,00
90,51%
88,54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
                                                                                                                                                                                                                      107 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                                                                                                            Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ō.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
```

Search completed: January 19, 2003, 05:05:46 Job Lime : 1895.76 secs

GenCore version 5.1.3 Copyright (c) 1993 - 2003 Compugen Lid.

A protein nucleic search, asing trame_plus_p2m model

January 17, 2003, 18:27:24 ; Search time 2053:03 Seconds (Without alignments) 7320.587 Million cell updates/sec

...TEMOKOMNUSMUTSNKEEK 928 US 09 026 459A 2 4737 Title: Perfect score:

1 MPPKTPRKTAATAAAAAEP. Section

Xqtpop 10.0 , Xqqpovt Ydapop 10.0 , Ydapext Fqapop 6.0 Fqapext Delop 6.0 Delext BLOSUM6.2 Scoring table;

15154066 seqs, 809774376 residues Searched:

fotal number of hits satisfying chosen parameters.

Minimum DB seq length: 0 Maximum DB seq length: 2050000000

Maximum Match 100% Fost processing: Minimum Match 0%

Listing lirst 45 summaries

Command line parameters: Model transe pzw.model -DEV-x1E

0 ' 140' | 145. Laplad Second 150' (150') | 140' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') | 150' (150') |

latabase :

em_estium:* em_estom:* om estpl:..
om estpl:..
om htte:.. em estinn:* 4b est5:* ⊕m estmu:• qb estz:* qb_est 4:• •:KO1SH WH qb estl:* *:01

om_gas_orher:* em dss mus: ∙ाम ब्राउटा मानमा. • em dss_hum:* ⊕ dss lnv:* • : uld: ssb; mo em_qss_lun: qb qss: em dss

. des bro: ...

Pred. No. is the number of results predicted by charge to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Resul	7 7 7 2	1 :	Query	Suery Suery Sait b Tabot b Db	ä	Ti-	
		1894	3.65	136.4	_	AKU11246	AKULLA46 MUS RUSS
	N	1551	32.3	10%	_	BMS61UB3	~
	*	1448	30.5	88	14	86550538	
	4	1 4 4 9	27.9	1001	÷	BM475403	BM475603 AGENCOURT
	r)	1254	26.1		3	AL:597811	3 118.
	ا ټ	1236.5	ж ж	3.3 30	Ξ.	MCCCCCCC	
	۲.	an 27	다. 요 다	# 30	~.	BM45 47.24	
	3 0		€4 €4	1024	~	BM450031	_
	<u>r</u>	1101	24.0	8 42	²,	A1646048	
C	10	1056.5	22.0	914	٠,	AA76 1411	
C	11	1043	21.7	242	3.	ALS6 475.7	ALSO 4757 ALSO 4757
	_	1037	21.6	606	<i>-</i>	A1.599633	
ti	~	1040	5.1.5	9 69	=	HE082846	MEGBZB46 RCZ Blo64
	7	1016	21.2	(2.3	0	AW58 1181	AW584181 iallh09.7
ζ,	u) -1	1013	1.	; 30	<u>,</u>	AA76 (485	>
	16	1004	20.9	5.75	<u>.^</u> 3	BG25 254 3	†94 (209
	17	978	20.4	588	୍ର	AW 16.8.2.14	4 CM + HT
	œ	974.5	20.3	703	<i>_</i>	A1646097	>
	16	462	20.1	7 3.6,	~	BII51568	8 602916
	20	656	20.0	5.94		AV715533	AV715534 AV715544
	7.7	955	19.9	584	12	BG149050	
	7.7	947.5	19.8	7+4		BF144857	~
	7.3	935	19.5	5 ¥ €		AL692790	
	2.4	413	19.0	615	ℱ	AA959836	AA9598 45 VW54101.8
	25	806		747		HE549278	
	-)	5	10 10			BMB0±200	MBGZ736 AGLNCOHRI
	5.7	885	18.4	27		AL120941	ALLIZOMAL DKEZP762D
	ထာ	879.5	18.3	3.4	13	BI526982	B:526382 602927177
	G G	869.5	: co: 1:	က် ၊ ကြ ၊ ယ ၊		180244088	B3244088 602358151
O	Ç.;	90 Y 80 Y	6.7	263		BE931236	
ر•	(200	9.1	78.		BE168095	
	7	83.5	7 :	646		HM4 904 16	
	47 J	er 0 20 20 20 20 20 20 20 20 20 20 20 20 20	1 : C	Υ 10 Φ 10	2 2	2000 C	
	# 15 n m	0 20 0	· · · · ·	က က က က က ယ) 	BE64220	BECOZEES 41 Z000 5.X
	2.4	-	16.74	9 9	-	AAAA 2002	1, 2000 1881 1881 2 1881 1881 1881 1881 18
	. ~	700		* 800		DAMA S.C. 7.30	
	- a	75.1	10.7	1007		5M45525	
	0 3	707	\ o = 0	7 : C		AW30 4:14	AWGOSTA UL HE BNU
		- (2. 4. 2. 4.	676	÷.	VA959/09	VW54u04
	4	7.03.5	14.	4 / 7	5	AA955457	AA955457 III -R AL e
U		00/		46.2	2	A1606529	3
					7	HF4 1 H 6 B 4	
U		<u>۾</u>		X.	74	HF827047	
	¢ :	581.5	14.2	46/	<u>.</u>	7 404	-
	4 ئ	c	5 . * - 1	651	~	B1696841	B1696841 60334467

ALTONMENTS.

RESULT 1 AK011246 LOCUS

AK011246 HE 19 JAN 2002 MAS HINGE HE 19 JAN 2002 Mus musculus 10 days embryo whole body cDNA, RIKEN Lull length enriched library, clone:2603617M22:retinoblastoma 1, full insert sednence. DEFINITION

AKÖl1246.1 GI:12847243 HTC: CAP trapper. ACCESSION VERSION KEYWORDS

SCORCE

Mus musculus (strain:c578L/bJ) 10 days embryo c5NA to mkNA, elone_lib:RIKEN full-length eoriched mouse c5NA tobrary clone:2600017M22.

Mus musculus ORGANISM

Eukaryota, Metazoa, Chordata, Chaniata, Vertehruta, Enteleostomi, Mammalia, Eutheria, Rodentia, Scinroquathi, Muridae, Murinae, Mus

```
/clonc-"2660017M22"
/clonc_lib-"RIKEN full length enriched mouse cDNA library"
/dev_ctage-"19 days embryo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ETERPETALGOKTRYPDRYKERAM TWEKYSSYDG TLEGYTÖKKKETWGTOFFTAAY
EFEMPETETFTOKSTETSVYKEFTGLEELID STAVDNAMSELLAKYNV JALYSKLE
RTOELIYLTOPSSALSTETBMINIKTSWITTELLANGEVLOMEDDLY ISFOLMICVVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YPIKESPPALLPFPYKTAALPIW:SPPTPPRGONRSARIAKGLEMDTRITEVLCKEHE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CUIDBUKNUYPKNEIPFINSLGIVSSNGLPEUESLSKRYEEVYLKNKULDARLELUID KTIGTDFIOSPETFFFFFFKNEEDEANVYIPHIPVEIVMIILGALUNYLLNSASDQPSE
                                                                                                              conallibrary was prepared and sequenced in Mouse Genome Broyelogedia troject of Geneme Exploration Research Group in Miken Genomic Sciences Center and Genome Science Laboratory in MIKEN.
                                          TOT COT I SHIP THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               193 rinarakinginannannannannanyakasakakingengegegegekekeegegegegege
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21 ProAlaPreProProProProProProCluCluAspProGluGInAspScrGlyProGlu 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 CysClulysLculysllclitoAspHisValArgGluArgAlaTrpLeuThrIrpGlutys 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41 AspLeuProLeuValArgLeuGluPheGluGluThrGluGluProAspPheThrAlaLeu 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 McthroProLysThrProArgLysThrAlaAlaThrAlaAlaAlaAlaAlaGluPro 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="data dource:MGD, source key:MGI:97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19 19 19
                         Shase visit our widesite (Ding Theorie gar
further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref "FANTCM_DB:2600017X22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                346 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref-"MCD:MC1:1905260"
/db_xref-"taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start=1
/protein_id="BAB27493.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism-"Mus musculus"
/strain-"C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            115-64-926-459A-2 (1 928) X AE911246 (1-1364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            307 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .ccation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NLISYFNNCTVNP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      evidence: ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.54e-178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene-"Rbl"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .>1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /qene-"Rb1"
Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1893 00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                306 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     93.90%
87.56%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          39.468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Host: SOLR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    404 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                      TNEWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S. Adachi I. Albawa K. Akahira, S. Akimora, I. Acho, H. Avai, A., Arakwa I. Paldaralli, R. Banc, H. Brumstein, M. Bull.C., Carninci, Bayatsu, N. Hills, R. Frunco, M., Hanagaki, T., Bara, A., Hayatsu, N. Hills, Hiramoto, K., Hiraoka, T., Horl, F., Hume, J. Horler, I. Horler, M. Saki, T. Horl, K. Nouda, M. Kasaka, M. Saka, M. 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kawai, J., Shinaqawa, A., Shibata, K., Yoshino, M., Itoh, M., Ishii, Y., Arakawa, T., Hara A., Pukunishi, Y., Konoo, H., Adachi, T., Pukuda, S., Alazawa, T., Hara A., Pukunishi, Y., Kiyosawa, H., Kondo, S., Yamanaka, T., Salto, T., Okazaki, Y., Gojobori, T., Peno, H., Rasukawa, T., Salto, R., Radora, K., Matsuda, H., Ashburner, M., Haralov, S., Casavant, T., Fleischmann, W., Gaasterland, T., Gissi, C., King, B., Kochiwa, H., Kuchi, P., Lowis, S., Matsuo, Y., Nikaido, I., Pesole, G., Washio, T., Sakai, K., Okido, T., Furuno, M., Aono, H., Raldarelli, K., Barsh, G., Blake, J., Rolielli, D., Rolinda, N., Fietcher, C., Fujita, M., Gariboldi, M., Castimetieb, G., Genaldo, M.F., Brownstein, M., Shult, C., Fujita, M., Gariboldi, M., Castimetieb, G., Mochen, C., Machen, C., Machen, L., Kamiya, M., Ice, N., Hill, B., M., Kamiya, M., Ice, N., Hill, B., M., Machen, L., Kamiya, M., Ice, N., M., Machen, C., Washio, M., Machen, L., Machen, C., Machen, L.,                                                                                                                                                                                                               Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itch M., Konno, H., Okaraki, Y., Muramatsu, M., and Hayashiraki, Y., Normalization and Subtraction of Cap-trapper solected chNAs to Genome Full-Longth cDNA libraries for rapid discovery of new genes 20499374.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Shibata,K., itch,M., Alzawa,K., Nagaoka,S., Sasaki,N., Carninci,P., Konno,H., Akiyama,J., Nishi,K., Kitsunai,T., Tashiro,H., Itch,M., Sumi,N., Ishii,Y., Nakamura,S., Hazama,M., Nishiier,T., Harada,M., Yamamoto,R., Matsumoto,H., Sakaquchi,S., Ikegami,T., Kashiwaqi,K., Yamamoto,R., Matsumoto,H., Sakaquchi,S., Ikegami,T., Kashiwaqi,K., Yonda,Y., Ishikawa T. Tawa,M., Chara,F. Wahahiki,M., Yonda,Y., Ishikawa T. Ozawa,K. Tanaka,T. Matsunta,S. Kawai, I. Okaraki,Y. Muramutsu,M., Hrouc,Y., Kira,A. and Hayashizaki,Y. Okaraki,Y. Muramutsu,M., Hanaka, Y. Sayuencinq pipeline with 384 mullicapillary sequencer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Marchionni, I., Mashima, J., Mazzarelli, J., Mombaeris, P., Nordone, P., Rinq, B., Pinyaeld, M., Rodriquez, I., Sakamoto, N., Sasaki, H., Sato, K., Schonbach, C., Seya, T., Shibata, Y., Storch, K.F., Sucuki, H., Toyo oka, K., Wang, K.H., Weitz, C., Whittaker, C., Wilming, L., Wyushaw-Horis, A., Yoshida, R., Haseyawa, Y., Rawaji, H., Kohtsuki, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-690 (2001)
                         Careler! F and Harachine! V High-officiency Full-length chNA cloning Meth. Enzymol. 303, 19-44 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      :1217851
5 (bases 1 to 1364)
Adachi 1 Aizawa K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21085660
                                                                                                                                                                                              10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11075861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JUNENAL MEDICINE
                                                                                                                                                MEDICAL
                                                                                                                                                                                              PULMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                 AUTHORS
                                                                                                                                                                                                                                         EFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4 FFRENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHURS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHURS
                                                                                                                  F-URNA:
                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                        TOTTRNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PATHEMAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PERMISS
                                                                                                                                                                                                                                                                                                                                                       31111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IIIE
                                                                            11.17
```

```
241 ThrAlaValileProlleAsuGlySerProArgThrProArgArgGlyClnAsnArgSer 260 .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               973 PARGAGLGTAATALAGATGAGGTGAAAAALGTTTATTTGAAAAATTTTATGGCTTTTATA 1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        109 * IATGAAGATITALCITAAAAACAAAGATITAGATGCAAGACTGITTIGGATCAIGAT 1152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           127 * NCTATICAACAATTAATGSTGATTTTAAATTCTGCAAGTGATCAGGGGGATCAGAAAATCTG 1432
                                                                                                                                                                                                                                                                                                                                                                                                                                 PZEGINJSSASUTIEGINTESSEVVÜHISLISCHERBERASULGULGGULGGULGSFILE 140
FELLEGEFELLEGEFELE
49 GAGAAAAGPAGAAAGPGULGIGIAJAAATICHIGACHAITAAAAGAAAAAAAGCSSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     221 CysVallewAsplythleHelystewSetFreBroMetLewLewLyntys 249 HTTELESSHIPHTHILLS HITHHILL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HITTEL SESTIMATION OF A TRANSPORT TO THE STANDARD OF A TRANSPORT OF A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD A TRANSPORT TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STANDARD TO THE STA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           401 AsuserfændlytænValThrSerAsuGlytæuProGluValGluAsnLæuSerLysArg 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421 TyrdludinilletyricufysAsniysAsplouAspAlaArqlouPholouAspHisAsp 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       441 LysthitleuglidhrAspSerlleAspSerPheGlufhrGlnArqlhrProArgLysSer 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361 AsnieuAspGluGluValAsnValIleProProHisThrProValArgThrValMetAsn 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481 DarlledindiniseuMetMetlleLeuAsnSerAlaSerAspGinProSerGluAsnLeu 400
81 ValserSerValAspGlyVallx=0GiyGlyIyrileGlnLySLySLySGluLcultpGly 100
                                                                                                                                                                                                                                                                              57. HAPPIACBAAAIAAAHCIAGIIGGIGGIAAAAAITICHIIIIHHHHHH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            261 AlaArgileAlaLysGInLeuGluAsnAspThrArgileIleGluValLeuCysLysGlu 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             473 GITTCATCCGTGGATGGTGGAAGGATATATTCAAAAGAAGAAGGAACTCTGGGGC 432
                                                                                                                                                                                                                   [10] TIECTSTREPHELIEALAALAVALASPIGUASPÜLUMGESETPHETHEPHETHTGLUIGU 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      141 SerthrigsValAspAsnAlaMetSerArgLeulæntystyrAspValLeuPheAla 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         55 4 AGTACCAAGGITGATAATGGTAAGGAGAGTATGAAGAAGTATATGTGTATGTGGA 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161 LeubheserLysLeuGluArqlbrCysGluLeulleTyrLeuIhrGlnProSerSerT80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181 IleserThr61a11eAsnSerAlaLeuValLeuLysValSerTrp11eThrPheLeuLeu 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           733 GITAAAGGAGAAGTALTAGAGGAAGATGAGGTGAGGTAATGTGATTTGAGGTAATGTTG 792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1333 ATTICHTHILLHILLIGALAATTICAACAGIGAAT 1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   401 HeserlyrPheAsnAsnCysthrValAsn 410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>~</u>;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
```

```
Library conding ted by Lite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Primer: oliqo dI.
                                                                                                                              Eukāryota; Metazoa; Chordata; Craniata; Vertebraia; Eufereostemā,
Mammalia; Eutheria; Primates; Catarrhini; Hominodae; Homo.
                                                                                                                                                                            1 (bases 1 to 1051)
MIH MGC http://mac.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                     cSNA Library Preparation: Lite Technologies, Inc., cons. Library Arrayed My: The L.M.A.G.E. Consortion (LLNL) blank Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGP clone distribution intormation can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    304 GAAAGTITTAFCAAAGCAGAAGGCAACTTGACAAGAAATGATAAAACATTTAGAAGGA +6+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   553 CysGluHisArglleMetGluSerfouAlalipleuSerAspSorProLougheAsplen 572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissa_type="retinobiastoma"
//fish_host="Dubling (piece resistant)"
//fab_host="Dubling (piece resistant)"
//fab_host="fabrication to the piece retinopial to the piece state is site; I: Not1; Site=2: Sall; Cloned unidirectionally. Frimer: class
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              433 AlaValGlyGlnGlyCysValGlutleGlySerGlnArqTyrLysLeuGlyValArqLeu 452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    64 TATTACCAG FAATGCALCCALGCITAAA LOAGAAGAAGAALALA LOTALLOAAAAT 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               473 PheserLysLeuLeuAsnAspAsnIlePheHisMetSerLeuLeuAlaCysAlaLeuGlu 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          493 ValValMetAlaThr1yrserArgserThrSerGlnAsnicuAspSerGlyJhrAspicm 512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  184 GTTGTAATGGCCACATATAGCAGAAGTACATCTCAGAATCTTGATTCTGGAACAGATTG 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                513 SerPheProTrpIleLeuAsnValLeuAsnLeuLysAlatheAspFheTyttysValilte 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        533 GluserPhelleLysAlaGluGlyAsnLeuThrArqGluMetIleLysHisLeuGluArq 552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 of hers
                                                                                                                                                                                                                                                                                                                                                                                                                             found through the L.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Average insert size 1.75 kL.
Technologies."
1 221 c 197 q 299 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Plate: LLAM1226≤ row: m column: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  indels:
                                                                                                                                                                                                                                               Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib-"NIH_MGC_67"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-026-459A-2 (1 928) x BM561083 (1 1051)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop: 747.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xrel="taxon:9606"
/clone="IMAGE:5550906"
                                                                                                                                                                                                                                                                                              Email: cqapbs-ramail.nih.qov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualitiers
                                        BM561083.1 GI:18806043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2.780-144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1551.00
93.268
91.508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12.138
mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .1051
                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity:
Query Match:
5', mRNA :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                          human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Aliqument Scores:
                                                                  EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOLLCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HASE COUNT
                                                                                                             ORGANISM
                                                                                                                                                                                                    AUTHORS
TITLE
                     ACCESSION
                                           VERSION
KEYWORDS
                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                 JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PEATURES.
                                                                                                                                                                                                                                                                         COMMENT
                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 óò.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
```

Š

LOWINS BM561083 LINEAR LINEAR LINEAR RST 20-FEB-2002 CO-FINE TON AGENCOUR LOSGES IN NIH MGT_67 HOMO SAPIERS CHARACED IMAGE: 5550905

RESULT 2

```
/db_xrel-"taxon:9606"
/clone-"lMAGE:6044522"
/clone_lib-"NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-026 459A 2 (1 928) x BQ220275 (1-881)
                                                                                                                                                                                                                                                                                                4.290-134
                                                                                                                                                                                                                                                                                                             1448.00
98.308
97.968
30.198
                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity:
                                                                                                                                                                                                            313 а
                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                          Aliqnment Soores.
                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
                                                                                                                                                                                                               COUNT
                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . 55
---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>ء</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;~
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               슾
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HUP2-127F
ACHMPHURI_7572621 RIH_MSC_92 HOLL, Supiens CENA CLORE IMAGE:6644522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Enkaryola Matazoa, Chordata, Cranidia, Vertebrata, Estelandi
Mammalia: Eutheria: Primates; Catarrhin: Hominidae: Homo.
                                                           974 | HellysoftaSertgsAaparryCholygrettsAapHistlaaGluSerAlaCysReduc 592 | HELLHITTHILLIHITHILLHIHITHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cond Library Preparation: Life Technologies, Inc. cond. Library Arrayed by The Lim A C.E. Consortium (LLNL) DNA Sequencing by Agencourt Bioscience Corporation Clone distribution: MGC clone distribution can be
                                                                                                                                                                     454 IGEGAACATGGAATGAGAATGAGTTGGATGGGTGTGAGAITGAGGTTTAITIGAIGIT 423
                                                                                                     424 ATTAAACAATCAAAAGAPCGAGAAAGAAFTAAFTAATFAAFTGAAFGIGGTIGIGGTT 483
                                                                                                                                                                                                                                                    673 Hisperal alongluthis Herler Infrahr toubbed hitts and hansa of unity 692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        593 AsubeuProbeuGlinAsinAsinHisThrAlaAlaAspMetTyrDeuSerProValArqSer 612
                                                                                                                                                                                                                                64.3 ProtystystystystyserfbrfkrArqValAsnSerfkrAlaAsnAla0lafhr4laAla 632
                                                                                                                                                                                                                                                                                                                  633 thrSerAlaPheGlnThrGlntysProLealysSerThrSerteuSerteuPheTyrLys 652
                                                                                                                                                                                                                                                                                                                                                                                                   454 LysValTyrArqLeuAlaTyrLeuArqLeuAsnThrLeuCysGluArqLeuLeuSerGlu 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7.24 CACCCAGAATTAGAACATATCATCTGGAAAATTTTGCAAGAAAAAATGAGTAT 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    693. Glubeumetaryasparghislonaspoln Dewermetogssorm of gribogs 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        714 LyavaliysAsnileAsp LeurysBaclysIloTlovalThrAlaTyrLysAspLeupr 732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       732 OHTeATaValGlnGluThrPbALysArgVal-LeuIleLysGluGluGluGlu-TyrAspser 751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               904 ICAIGCIGNICAGGAGACATICAAACGIGIGITGAITGAICAAGAAGAGAGAGAGAGGIGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     National Institutes of Health, Mammalian Gene Collection (MCC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               964 IATATAAGNATTCCTATAACTCGGGCCTTTCATGCAAGGAGACTGAAAAACCAAATA 1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Clone distribution: MGC clone distribution infortioned through the I.M.A.G.E. Consortium/LLNL at: http://imagellnlgov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plate: LLAM13287 row: e column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D.
Email: cqapbs-remail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /orqanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 881)
NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            High quality sequence stop: 690
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80229275.1 GT:20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              інттап.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTESSTON
VERSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRUANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYW-RDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        * 171.83%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HU220475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEALURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000 S
                                                                                                                                                                                      Ę
                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                        ij
                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          芒
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                 Ś
```

```
/tissuc_type "cmbrychai cateinoma, cell line"
//dab.host "pH10B (phage-resistant)"
//note-/Organ: testis; Vector: pcMV-SPORT6; Site 1: Not1;
Site-2: Sali, Cloned unidirectionally; Oligo-dI primed.
Average insert size 2.5 kb. Library enriched for
full-tength clouds and constructed by Lite Technologies.
Note: this is a NH-MCC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3.07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123 GGTTCACCTCCAACACCCCAGGCGAGGTCAGAACAGGAGTGCAGGATAGCAAAACAACTA 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        363 ANTANAGATOTAGATGAAGATTATTITIGGATGATGATAAAACIGTTGAGAGTGATGT 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              408 %brvalAsnProtysGluger13eLeutysArgVa.LysAsp1teClytyr (Lethicitys 427)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           248 GlyserProArtThrProArtaSlyGluAshArgezAluArqIleAlaLysGlnLou 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  268 GluAsnAspThrArgileIleGluValLeuCysLysSluHisGluCysAshIleAspSlu 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        488 IleLeuAsnSerAlaSerAspGlnProSerGluAsnLeuIleSerTyrPheAsnAsnCys 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 543 ATITIAAAITCACCAAGTGAICAACCIICAGAAAAICIGAITTCCIAIIIIAACAACIGC 602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 503 ACAGIGAATOOAAAAGAAAGTATAOTGAAAAGAGTGAAGATAIATAGGAINGAIAGAATAIAAA 662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  108 GlurysPheAlaLysAlaValSlyGlnGlyCysValSlufleGlySerGluAraTyrLys 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                448 LeuglyValArqLeuTyrTyrArqValMetGluSerMetLeuLysserGluGluArq 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     328 AsalysAspLeuAspAlaArgLeuPheLeuAspHioAspLysThrLeuGlnThrAspSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           % SerAsnSlyLeuProSluValSluAsnLeuSerLyoArqTyrSluSluIleTyrLeuLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         368 ValileProProHisThrProValArqThrValMetAsnThrIleGlnGlnLeuMetMet
                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                Mismatches:
Indels:
                                                                                                                                                                                                                                                                           Length:
                                                                                                                                                                                                                                                                                                Matches
```

```
Contact: Poustka A.J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFFRENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>q</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>q</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                            ò
                                                                                              9
                                                                                                                                                                         a
                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                               BM475603
ADENDOURT_64B0007 NIH_MGC_92 Homo Sapiens cDNA clone IMAGE.5575683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zuote-Tornam: Testis: Vector: pGMV SpokT6; Site_1: NotI: Site_2: Sall; Cloned undirectionally; olido dl primed. Average insert size_2: &b. Library enriched for toll length efonces and constructed by Life technologies. Note: this is a NHH-MGC Library.
                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota: Metazoa; Chordata: Craniata; Vertebrata; Euteleostomi;
                                      chNA Library Preparation: Life Technologies, Inc. chNA Library Arrayed by: He L.M.A.G.E. Consortium (LLNL) binA Sequencing Addressive Adversary Adversary Adversaries Close distribution information close distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    155 FyrAspVallæuPheAlaLeuPheSerLysLeu-GluArgThrCysGluLeuIleTyrLe 174
723 CHIGGAGTICOCHGTATACOGAGTAAIGGAATGCATGCTFAAATGAGAAGAAGAAGA 782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      135 LeutysGluffeAspfbrSerfbrfysValAspAsnAlaMetSerAtqLeuLysLys_154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98 IATGA IGIA ITGITTGCACTCIT CAGGAAATTCGGAAAGGACGGGAACTTATATATTT 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             174 uthrishierosersersertteserthrishitteasuserAlateuValleutysValse 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                               National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia: Eutheria: Primates: Catarrhini; Hominidae: Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue type-"embryonal carcinoma, cell line"
/lab_host "DilOR (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   found through the L.M.A.G.E. ConsortLun/LLME at: http://imaqe.llnl.qov
Plate: LLAM12326 row: t column: 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
Mismatches:
                                                                                                                                   94 \leftarrow FoggGGGGGGGGGASIIGMAAGGCCACATATAGC 880
                                                                                                                487 enAlaCysAlaLenGiuValValMetAlaIhrlyrSer 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db xrof:"taxon.96o6"
/clone ":MAGE:5575683"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
contact: Robert Strausberg, Ph.D.
Email: cqapks:rmail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15 09 026 459A Z (1 328) X BM475604 (1 1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           High quality sequence start: 17
High quality sequence stop: 744.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib-"NIH_MGG_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 : sdpc
                                                                                                                                                                                                                                                                                                                                                                                                                                           NIH MGT http://mgc het.nih dov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers

[...1001]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      186 4
                                                                                                                                                                                                                                                                                                          BM475603.1 GI:18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.140-125
                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  449,00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93.878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      178 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ¥16,77
                                                                                                                                                                                                                                                                        S', mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                     Home Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
coery Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14'9 a
                                                                                                                                                                                                                                                                                    BM475603
                                                                                                                                                                                                                                                                                                                                                human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Aliquinent Secres:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a. Thos
                                                                                                                                                                                                                                                    NEED IN LESS
                                                                                                                                                                                                                                                                                                                                                                  CROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RASE PAINT
                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                           RELEMENTE
                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOHNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  President. No.
                                                                                                                                                                                                                                                                                                                              KLYWORDS
                                                                                                                                                                                           PESULI 4
                                                                                                                                                                                                             14M4 755.03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11 1 1 1 1 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
```

```
lim ar EST 14 AUS 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Poustka,A., Wellenreuther,K., Mewes,H.W., Weil.E. and Wiemann.S.).
EST (Poustka,A., Wellenreuther, E., Mewes,H.W., Weil.E. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota, Metazoa, Chordata: Chaniata, Vertebrata: Eufeleostomi;
Mammalia; Eutheria; Primates; Catarihini; Hominidae; Homo.
1. (bases 1-to 727)
                                                                                                                                                                                                                                                                                                                                 274 eChaVall.cuCystysGluHisGluCysAsnilcAspGluVallysAsnVallyPhetty 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 394 pGInProSetGluAsmiculle SerTyr PheAshAsm/ysthrval AshProlysGL 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           878 AAAGCTATACCGGAAAAGAAGCGIAAGGAATATAGGAATAACCTCTTTTAAAGAAAAAA 947
278 ITCALITICAGITAATGCIAAGGCTGACTATITIATIAAACTCTCACTGCCALGTE 3-07
                                                                                                                                                                                                                                                                                                                                                                                                            254 qArqGlyGlnAsnArqSerAlaArqIleAlaLysGlnLeuGluAsuAspTftrArqIle11 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                458 TGAAGTTCTCTGTAAAGAAGALGTAAAAAAAAGAAGGGGGAAAAAAGTTTATTTCAA 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     334 glieuPheLeuAspHisAspLysThrLeuGLnThrAspSerlTeAspSerPheGlnThrGl 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Photyschutys 429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DKEZP313C0816_F1 413 (synotym: Alech) Boac dapieno (ERA clone)
DKEZP313C0816-5', mRNA Sequence.
ALS97811
                                                                                   194 rTrp11eThrPheLeuLeuAlaLysGlyGluValLeuGluMetGluAspAspLeuVall1 214
                                                                                                                                    218 TTGGATCACATTTTTATTAGCTAAAGGGGAAGTALFACAAATGAGAGATGGATCTGGTGAT 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       374 oValArgThrValMetAsnThrIleGlnGlnGlnLeuMetMetIleLeuAsnSerAlaSerAs
                                                                                                                                                                                                                                                                                                  234 bloodysCluPtoly:LysThtAlaValITePtofleAsnGlySetTroArqThrPtoAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           314 lGluAsnLeuSerLysArqTyrGluGluIleTyrLeuLysAsnLysAspLeuAspAluAn
                                                                                                                                                                                       214 eserPheClinteuMetteuCysValleeuAsplyrPhelletysteuMerProProProMetLe
                                                                                                                413 useriletentysArg.....ValtysAspiledtyfyrile.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          747 Lp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ALS97811.1 GI:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      430 - PheAlaLysAlaValGly 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          938 PTCTGGCTAAAAGGCTIGGGG 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AL597811
```

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                            ô
                                                                                                                                                                                                                  DD.
                                                                                                                                                                              Reidelberg/Čormany) within the ≏DNA sequencing appsortiom of the
                                                                                                                                                                                                                                                                                                                                                                                                                               Znode="Vector" pTriplEx2: Site_1: SfilA: Site_2: SfilR; cDNA-collection"
                                                                                                                         Clone from S. Wiemann, Molecular Genome Analysis, German Cancer Research Penter (1887) [1841] S. Wiemannaukker, heideltery de-
                                                                                                                                                                                                             No si sequence available.
This clone (DKFZp313000H6) is available at the RZPD in Berlin.
Please contact the RZPD: Ressourcenteum, Heubnerweg 6, 14059
Herlin-Charlottenburg, GERMANY: Email: clone@rzpd.de.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         74 * LeulleLyschuchushafyrAspSerIleIleValPheTyrAsmSerValPheMetGlm 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          564 AsoThrLeuCysGluArqLeuLeuSer@luHisProGluLeuGluHisIlellelrpThr 682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    584 LeuPheGluHisThrLeuGlnAsnGluTyrGluLeuMetArqAspArqHicLeuAspGln 702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7.24 IlelleValThrAlaTyrLysAspLeuProHisAlaValGlmGluThrPheLysArqVal 74.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             783 AndrealysThrAshileLeuClnTyrAlaSerThrArgProProThrLeuSerProffe 782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   783 ProffisileProAigSetPioTytLysPheProSetSetProLeuAigIleProGlyGly 802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 AAAICIACCICTCIIICACIGIIIIAIAAAAAAGIGIAIGGGGIAGGGCTAGCCIATCICGGCTA 61
                                                                                                                                                               sequenced by DKFZ (German Cancer Research Center,
           Max-Planck-Institute for Molecular Genetics Thnostrasen 73, 14195 uovitn, Germany [Celt. 49-30-84131162].
                                                                                                      This is the 5' sequence of the clone insert
                                                                                                                                                                                                                                                                                                                                                                            Action | 16 "213 (symbosyme blogs)"
|/dev_stage="adult"
/lab_bost="pHloR"
                                                                                     Email: poustka@mpimg-berlin-dahlem.mpg.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative.
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       198 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                                       /ordanism-"Homo sapiens"
/dh_xrot "taxon.9606"
/olono-"DKEVp31300816"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (1-727) X ALS97811 (1-727)
                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     130 g
                                                                                                                                                                                                   German Genome Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8.19e-115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1254.00
99.598
99.598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161
separiment Lehrach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26.14%
                                                                                                                                                                                                                                                                                                          7.27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bost Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                          s arrow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ..
Ç
                                                                                                                                                                                                                                                                                         PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NICH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ==
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>=</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>~</u>
```

```
RQ222227
AGENCOURT_7555015 NIH_MSC_92 Home sapiens CDMA clone IMAGE:6041563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eufeleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="Note: 6041563"
/clone_lib="Note: 6041563"
/clone_lib="Note: 6041563"
/tissue_type="cmbiryclaid catchioma, cell line"
/lab_lost="Diff 0 (949e-resistant)"
/note="Cordan: testis: Vertor: pcMV-SFORT5; Site_l: Not1; Site_2: Sali: Cloued unidirectionally: clist-of-primed. Notage insert size 2.5 kb. Library enriched for full-length clones and constructed by Life lechnologies.
Note: this is a NH-MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA Library Preparation: Lite Technologies, Inc.
CDNA Library Preparation: Lite Technologies, Inc.
CDNA Library Arrayed by: the 1.M.A.S.H. Consortium (LINE)
DNA Sequenched by: Agenceart Blacetience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://maqe.llnl.gov
Plate: LLAM3279 - Tow: 1 column: 20
High quality sequence stop: 606.
                                                                                                                                                                                                                822 ThrigsMetThroArgScrArgIlcLeuValScrIleOlyOluSerPhcGigThrScr 842
                                                                                                                               843 CluLysPheGlnLysIleAsnClnMetValCysAsnSerAspArqValLeuLysArqSer 862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 880)
NIH MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammailan Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      482 AACATCTATATTTCACCCCTGAAGAGTCCATATAAAATTTCAGAAGGTCTGCCAACAACA 541
                                                                                                                                                    Matchos:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Robert Strausberg, Ph.D.
Email: cqapbs-rëmail.nih.qov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Home sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1 880)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lissue Procurement: AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              118-04-026 (594 2 (3 928) ¥ PC22227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BQ222227.1 GI:20403627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6,11c-113
1236,50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92 вия
90.75%
25.78%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity:
                                                                                                                                                                                                                                                                                                          883 AspGlu 884
                                                                                                                                                                                                                                                                                                                                                    722 CATICAA 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                               NOTEINIAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                              1.000g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                           RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
```

```
linear EST 05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ANENCOURT 6402744 NIH MGC 72 Homo sapiens clow clone IMAGE:5528814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota: Metazoa: Chordata: Craniala: Vertebrata: Euteleostomi;
Mammalia: Eutheria: Primates: Catarrhini; Hominidae; Home.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               417 Leusert.ysarqiyrG1uG1u1le1yrLeu1.ysasni.ysaspi.euaspalaargi.euPhe 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 CONTROL TO THE STATE SALAR SALAR SALAR STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181 CASTIANIGGIAGGEOGEGACIATETTATETAAACTGEGACGEGALGTIGGEGAAA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            401 CAGAACAGGAGTGGAGGATAGGAAACAACTAGAAAATGATAGAAAATGATAGAAGTT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                45] CTCLGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTCA20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     297 HetrothomerAsuSerLeudlyLeuValThrSerAsnGlyLeuProdluValGluAsn 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421 ATACCITITATGAATICTCTTGGACTTGTAACATCTAATGGACTTCCAGAGGTTGAAAAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481 CITECIAAACGATACGAAGAAATITATCTTAAAAATAAAGATCTAGATGCAAGATTAITT 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               137 LeuAspHisAspLysThrLeuGluThrAspSerIleAspSerPheGluThrGlnArqThr 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          457 ProArgLysSerAsnLeuAspGluGluValAsnValIleProProHisThrProValArg 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601 COACGAAAAAGTAACCTTGATGAAGGTGAATGTAATTCCTCCACACACTCCAGTTAGG 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         477 ThrValMetAsnThrILeGInGInLeuMetMetIleLeuAsnScrAlaSerAspGIn-Pr 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661 ACTUITATGAACAUTATGAACATITAATGATGATTITAAATGCAAGAAAGAAAACAACC 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             996 oSerGluAsnLenlle SerTyrPheAsuAsnCysThrValAsn · ProLysGluSerI 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 National Institutes of Health, Mammalian Gene Collection (MGC) Oupublished (1999)
                                                                                          127 ProSerSerIleSerThrGluIleAshSerAlaLeuValLeuLySValSerTrpIle 196
1 GIALIGILIGGACTOTICAGGAALIGGAAAGGACATGIGAACTIIALALALIIGAGAAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LysArqVallysAspIleGlyTyrIlePhe---- LysGluLysPhe 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  277 Leurystysöl-illisströysAssileAspolaValiysAsuValiyrifhetysAsnIhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                        21? ChilemMetLewrysValLewAspTyrPhelleLysLeuSerProProMetLeuLeuLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            247 ClubrolyrtysThrAlaVallleProlleAsuGlySerProArqThrFrcArqArqSly
                                                                                                                                                                                                                                                                         197 thrPhoLouLouAlaLysC!yCluValLouGLbMotGluAspAspLouVallleSerPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            845 bp mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NIB MOS http://mac.nej.nib.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HM454724.1 01:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 835)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    51, mKNA sequence.
BM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Home Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BM45.87.24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NELLINITES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRUMAISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTESS FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KILLKILKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOHNNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HM45 57 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              : MMENI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20,87
                                                                                                                                                                                    Ē
                                                                                                                                                                                                                                                                                                                                                         =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ĩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
```

Lissue Procurement: AICC/DCID/DIP

Email: eqapbs remail.nih.gov

```
/note="organ: skin; Vector: pGMV Shouffs, Site 1: Not1;
Site_2: Sall; Cloned unidirectionally. Primer: Oliqo di.
Avenat insert size 2 kb. Library constructed by Lite
Technologies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             639 ThrGInAlaThrSerAlaTheGluThrGluLysProtautysSerThrSerLeuserLeu 649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cONA Library Preparation: Lite Technologies, Inc., CDNA Library Arrayed by: The L.M.A.G.E. Consort tum (LLNL) DNA Sequencing by: Apercourt Bioscience Corporation Clone distribution: NGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   590 CysProLeuAsnLeuProLeuGlnAsnAsnHisThrAldAlaAspMetTyrLeuSetPro 609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            670 LeuserGluffsProGluLeuGluffisHelfeTrpThiLeuPheGluffisThiLeuGln 689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 690 AsnGlulyrGluLcuMetArqAspArqHisLenAspGlulleMert@ssanMerlyr 709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 H 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       210 GP/19CystysVallysAssilCAsptentysPhetysTictTeVallhatatyttys 729 HTHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                740 AspLeuProHisAlaValGlnGluThrPheLysArqValLeuIleLysGluGluGluTyr 749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         610 ValArgSerProLystystysClyserThrThrAraValAsnSerThrAlaAsnAlaGlu 629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   488 GGCALALGGAAAGTGAAGAATALAGACCTTAAALFCAAAAAGALTATAAAGAATACAAG 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              570 PheAspLeulleLysGlnSerLysAspArgGluGlyProThrAspHisLeuGluSerAla 589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    68 ITTGATCTTATTAAACAATCAAAGGACCGAGAAGGACCAACTGATCACCTTGAATCTGCT 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            248 ACACAAGGAACCTCAGCCTTCCAGACCCAGAAGCCATTGAAATCTACCTCTCTTTCACTG +0.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8 GTCCGACGATGTGAACATCGAATCATGGAATCCCTTGCATGGCTCTCAGATTCACCTTTA 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             650 PheTyrtystysValTyrArgleuAlaTyrLeuArqteuAshthrleuCysGluArqteu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      550 LeuGluArgCysGluHisArglleMetGluSerLeuAlaTrpLeuSerAspSerProLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 others
                                                                                                                                                                                                                                                                                                                  /Lissue_type="melanotic melanoma"
/lab_bost="DH10B (phage:resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Commerciative:
Mismatches:
                                                                                                      http://image.llnl.gov
Flate: LLAM12206 row. e column: 67
High quality sequence stop: 647.
Localion/qualitiers
L. 83%
/Organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                  244 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                        /clone_lib-"NIH_MGC_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                   /elone="!MAGE:5528814"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-026-459A-2 (1-928) x HM453724 (1-835)
                                                                                                                                                                                                                                              /db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                             147 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.010-110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1208.00
92.91%
91.04%
                                                                                                                                                                                                                                                                                                                                                                                                                                                210 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25.18%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                      SOUFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                           .
-.
```

```
Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          data is from the 3' end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A1646038.1 G1:4724513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MGI:661298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A1646038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ت
                                                        ò
                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δλ
                                                                                                                                                                                                                                                                                                                                                       FM450031 1023 bp mRNA linear EST 05-FEB-2002 AGENCOURT 6393544 NIH MG2 72 Home Sapiens CDNA Flood IMAGE:5528037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note-"organ skin Vertor pewo Steel Ret., Ret., Site_2: Sall; Cloned unidirectionally. Primer: Olige dr. Average insert size 2 kb. Libiary constructed by Life Technologies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bukaryota: Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia: Buthoria: Primates; Catarrhini: Heminidae: Hemo Discos: 1 (bases: 1 to 1023)
NIH:MGC http://mac.nci.nih.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by Agenoust Bisspience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LINL at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      '50 AspserllelleValPheTyrAsnSerValPheMetGlnArgLeuLysThrAsnIleLeu 769
                                     5.08 GATLCTALLAFAGTATFCFAFAGFCGFCFFCAFAGAGAGAGFGAAAAAAAFAFFFG - 667
                                                                             770 GlafyralaSerfhrArgProPro ThrLeuSerProlleProHisile-ProArgSe 788
                                                                                                                                                          788_rProfyilys---PheProSerScrProLeu---ArgllePro---GlyGlyAsn----- 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   734 HisAlaValGinGluThrFheLysArqValLeuIleLysGluGluGluTyiAspScrile 752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Z AAAGIGAAGAALALAGACCITAAAFICAAAATGATTGTAACAGGATACAAGGATCTTCCT 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: cgapbs râmail.nih.gov
Lissue Procurement: ATCC/LCLU/DTP
CDNA Library Preparation: Life Technologies, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1024
216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /Lissue_type-"melanotic melanoma"
//ab_host-"pH108 (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              renitendellus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              197 q 281 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone_lib-"NIH_MGC_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TE 01 -26 4558 z (1 328) x BM450051 (1:1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High quality sequence stop: 643.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rlone-"IMAGE.5528037"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                     804 ·IleTyrlleSerProLeuLys 810
                                                                                                                                                                                                                                                              RM450031,1 G1:18499071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         001-066 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1111.00
100 00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            211 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23.168
                                                                                                                                                                                                                                                                                                                                                                                               5', mKNA sequence.
BM450031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ਹ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alidiment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    poory Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             201108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INI.
                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                  ACT DESCRIPTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 THORNAL
                                                                                                                                                                                                                                                                                                                RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . WWI.N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SHIROE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              I. CUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HASE
```

```
vw54a10.x1 Soarcs_mammary_qland_NMLMG Mus musculus cDNA clone
IMAGE.1247610 3' Similar to ab.M26391 Monse retinablastoma
Susceptibility protein (MOUSE);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
Eukaryota, Motazoa, Chordata, Graniata, Vortebrata, Euteleostom);
Mumealia, Futheria, Pedentia, Schorognathi, Muridae, Murinae, Mus.
1 (bases 1 to 812)
NCI 65AF http://www.ucbi.nim.nih.gov/nelegap.
NCI 65AF http://www.ucbi.nim.nih.gov/nelegap.
National Gancer Institute, Cancer Genome Anatomy Froject (GSAP),
Tumor Gene Index.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This clone was previously sequenced on the 5' end only, this new
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: cgapbs-rémail.nih.gov
This close is available royalt, lieu through LENE , contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                       753 IleValPheTyrAsnSerValPheMetGlnArgLeulysThrAsnileLeuGlnTyrAla 772
                                                                                                               813 TyrtysileSerGluGlyLeuPreThrProThrLysMetThrProArgSerArgileLeu 842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       833 ValSerIleGlyGluSerPheGlyThrSerGluLysPheGlnLysIleAsnGlnMetVal 852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     923 /ystystenArgtheAstrleGtogtyScrAspStaAtaspStyScrtysBtstenPro 892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  893 GlyGluSerLysPheGlnGlnLysLeuAlaGluMetThrSerThrArgThrArgMetGln 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           482 AAAAAACTACGTTTGATATTGAAGGATCAGATGAAGGAGGAAGTAAACATGCCCA 541
                                                                                                                                                                                                                                                                                                773 SerThrArgProProThrLeuSerProTleProHisIleProArgSerProTyrLysPho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        602 AAGCAGAAAATGAATGATAGATACGTCAAAGGAAGGAAA 649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           913 tysGlntysMetAsnAspSerMetAspThrSerAspLysGluGluLys 928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xrcf="taxon:10090"
/db_xrcf="taxon:10090"
/clone="lMAGE:1247610"
/clone_llb="Soares_mammary_qland_NMLMG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Possible reversed clone: polyT not found
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /sex-"temale (lactating)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High quality sequence stop: 482.
```

721 AGCGCTCTGATAGCAAACTAGA AALGALA GALGALLALCGAGHL CLCTGTAA 777

5

```
//ab_larst_Tofflob*
//ab_larst_Tofflob*
//ab_larst_Tofflob*
//ab_larst_Tofflob*
//ab_larst_Tofflob*
//ab_larst_Tofflob*
//ab_larst_Tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_larst_tofflob*
//ab_l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180 SerileserthrüluileAsuserAlaLeuValLeuLysValSertrpileThrPheLeu 199 ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           140 Thr SerffartysValAspAssAlaMet SerArgLeuLeutystysGyrAspValLeuPhe 159 Hillittitititititititititititititititi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120 TemphalysAsalledlalleSerValHisLysFbefheAsaLedLedLysSl.HeAsp 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                422 GCACTCTACAGCAAATTAGAACGGACGTGTGAACTTATATATTTGACACCAAGCAGT 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             200 tenahanysdlydluValLendluMetGluAspAspLeuVallleSerPheGluLeuMet 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            220 landysVallanAsplyrPhelleLysLeuSerProProMetLeuLeuLysGluProTyr 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240 LysThrAlaValIIoProlleAsnGlySerProArgThrProArgArgGlyGlnAsnArg 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661 ANAACAGNCTGCATCCCATTAATGGNTCACCTCGAACACCAGAAGAACTCAGAACANG 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          260 SerAlaArqIleAlaLySGluLeuGluASnASpThrArqIleIleGluValLeuCySLyS 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100 51711ofystlePhetleAlaAlaValAspleuAspGluMetSerPhethrPhethrGlu 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       242 GGCATCTGGATCTTTATCGGAGCAGTTGATCTAGAGATGGCATTCACTTTTACTGAG 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     662 ACCAGITACCAAGGITGATAATGCIAIGICAAGACIATIGAAGAAGIATAAIGIGITAIGI 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60 LeucyschutysteutystleProAspHisValArqGluArqAlaTrpLeuThrTrpGlu 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20 ProProAlaProProProProProProGluGluAspProGluGlnAspSerGlyPro 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40 GluAsplæuProfæuValArqfæuGluPheGluGluThrGluGluProAspPheThrAla 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     832
228
18
18
5 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
/tissue type-"mammary gland"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US 09 026 459A 2 (1 928) X A1646038 (1-832)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.01e-99
1101.00
88.17%
81.72%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22.95%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   766 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similari'7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Aliqument Sevres:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Querry Matchi:
LB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   MASSES COUNTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N 1 : 1 N
```

Š 3 ---Ξ \hat{z}_{i} â 5 40

-- 3 3 ÷ Ξ,

:---Ē

5

ŝ

```
Marra, M., Hillier, L., Allen, M., Howles, M., Dietrich, N., Dubique, L., Geisel, S., Knedball, Jacy, M., Le, Millin, J., Marris, M., Schellenberg, K., Sheplewed, K., Sheplewed, K., Moore, B., Theising, B., Wylle, T., Lennon, G., Soares, B., Wilson, K., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Forter-Text pTTT3D Pac (Pharmacia) with a modified polylinker; lst strand cDNA was prepared from mammary polylinker; lst strand cDNA was prepared from mammary with a Not I = 00100(dl) primer. Dombic stranded cDNA was ligated to Eco RI adaptors (Pharmacia), diepsted with Not I and cloned into the Not I and Eco RI sites of the madified pTTT3 vector. Library is numbrined. Library was constructed by Heato Soares and M. Fathum Bonaldo. " 178 c 201 t inthes
                                                                                                                                                                        University UST 27 JAN 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia; Eutheria; Rodentia; Sciurodnathi; Muridae; Murinae; Mus
1 (bases 1 to 914)
                                                                                                                                                                                                                                                                                                                                                                                                                                               Bukaryota, Metazoa, Chordata, Franiata, Vertebuata, Bareleostomi,
                                                                                                                                                               AA763411
wA54041 SOJCS_mammaty_diad_NNAMC_MAS_mas_us_schools_choole
NAGE:1247598 5' similar to qb.M15400 REINOHASIOMA_ASSCHAIED
PROTEIN (HUMAN): qb:M26391 Mouse_relinoblastoma_susceptibility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This vione is available royalt, free through LANL; contact the IMAGE Consortium (into⁴lmaqe.llnL.qov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                336 PheteuAspHisAspLys1biLeuGInThiAspScrTicAspScrPhediuIhrGInArq 355
778 GAACACGAGTG-AALALAGALGAGALGAAA - ALGITATILICAAAAATTALOCCI 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4444 Forest Park Parkway, Box 8501, St. Louis, Mo 64108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib-"Soares mammary_aland_NMLMG)"
/Sex="fendle(lastating)"
/lissue_lype="mammary_aland"
/lab_bost="bH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WashU-HHMI Mouse EST Project
Washington University School of MedicineP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Seq primer: -28ml * revz El from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lendth:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Maria M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Mus musculus"
/db_xiel-"taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The WashU-HHMI Mouse ESI Project
Unpublished (1995)
                                                                                                                                                                                                                                                                      protein (MOUSE);, mRNA sequence.
AA76:411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop: 422.
Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zelone-"IMAGE:1247598"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-026-459A-2 (1-928) x AA763411 (1 914)
                                                                                                                                                                                                                                                                                                                               AA764411.1 G1:2813158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6.51e-95
1056.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          82.148
75.978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ally, ALCT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tel: 414 286 1800
Fax: 414 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .914
                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                        house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MGI:661286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                257 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Source
                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No.:
                                                                                                                                      AA764411/c
                                                                                                               RESULT 10
                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEKKENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHURS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOHNAL,
                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                     COCDS
```

us-09-026-459a-2.rst

```
Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia: Putheria: Primates: Catarrhini, Hominidae, Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16475 A 4563757 EST LANGO SAPION CONTROL OF THE SAPENS OF A SECTION AND SAPION OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPENS OF SAPE
                                                                                   856 ACCCCACGCAAAACCACCCTTGT -GAAGGGGGGGGTTAGTGCCCCCCACCCCGGTT 798
                                                                                                                                                                                                                                                     336 ProSerGluAsnLeulleSerTyrPheAsnAsnCysThrValAsnProLysCluSerlle 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.8 cleatyCysValGluIleGlySerGlnArgTyrLysLeuGlyValArgLeuTyrTyrArg 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 476 LeuLeuAsnAspAsnIlePheHisMetSerLeuLeuAlaCysAlaLeuGluValValMet 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      L"
"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               576 SertiysAspArgGluGlyProThrAspHisLeuGluSerAlaCysPtoLeuAshLeuPro 595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fy6 LeudinAsnAsnHisThrAlaAlaAspWetTyrLeuSerProValArqSorProLysLys 615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *16 LyselySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAla 635
456 ThrPr:ArqLysSerAsnLeuAspGlusluValAsnVallleProFioHisThrProVal 375
                                                                                                                                                                                                 476 ArgThrValMetAssThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAspGln 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                737 COCTCAGAAINICIGHT-TCCCHCTCTAAIATGGGCCGGGAAACCCGAAAGAAATGGC 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              418 LeutysArqValLysAsFileGlyTyrIlePheLysGluLysPheAlaL,sAlaValGly 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             522 CCAGGCTGTGTGTGTCGGAGTACAGCGATATAAACTTTGAGTCGGATCGTATTACCGT 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     456 ValMetGluSerMetLouigsSerGluGluGluBluArg.cuScrflcGluAsnPheSert.gs 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.6 AlaThrIyrSerArqSerThrSerGlnAsnLeuAspSerGlyThrAspLeuSerPhePro 515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            882 TGGATTCTGAACGTACTTAATTTAAAAGCCTTTGATTTTTACAAAGTGATTGAAAGGTTTT 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     936 IleLysAladludlyAsnLeuThrAraGluMetileLysHisLeuGluArqCysGluHis 555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      556 AralleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysGln 575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                202 FOCAAGGATGGAGAAAAGGACT - - GATAACCTTGAAGGTGGTTGTCGTCTCAGCCTGCCT 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        145 MICCAGGGIAACCATACHGCAGCAGAGATATGTATCTTCTCCTCTAAGATCTCCAAAGAA 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              * & STGAIGGAATCCATGCTTAGATCAGAAGAAGGAAGGTTTGTCCATTCAGAATITTAGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    +36 PhediathrdiniysProteutys 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25 TICCATACTCAGAAGCCATTGAAA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AL563757.1 GI:12913464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        prime, mRNA sequence.
ALS63757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 11
Al%e 1977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RUBANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYKIN
KEYKIN
KEYKIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSI 'N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3(1, 1)
                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \hat{z}_j
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ĩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ē
```

```
/nole-"Organ. Binin, Vector. pCMVSPORT 6; 1st strand cDNA was primed with a Noil-Oligo(dT) primer. Five prime end enriched, double-stranded cDNA was diseased with Noil and cloned into the Not I and PCO PV sites of the pCMVSPORT 6 vector. Library was normalized, Library was constructed by Life Technologies. Contact: PCOM Library was constructed by Life Technologies, a division of Invitrogen 9800 Medical Center Drive Bockville, Maryland 20866, USA Fax: (1) 301 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 260 SeralaArgileAlaiysGluleuGluAshAspihtArqileHeGluVaHeuCystys 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            671 GAAPATGAATGIVATAFAGWIPAGGIGAAAATGTTTWITTCAAAAATTTIAIACCIFFF 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           320 Arg"yrCluGlarIcTyrLculgsAszlasAspla.dAspAladigicurba.cuaspHis 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360 SerAsnLeuAspGluGluValAsnValileProProHisThrProValArqIhrValMet 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     380 AshurbitoginginicuMethleLeuAsnSerAlaSerAspCluProSerGluAsn 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             731 AGUGCACCOWTAGCAACACAAYTAGAAATTGATACAACAATTATTGAAGTTGTCTGTAAA 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             551 CGATACGAAGAAATTTTTCTTAAAAATAAAGATCTAGATGCAAGATTATTTTTGGWICAL 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          490 LeuileSerTyrPheAsnAsnCysThrValAsnProLysGluSerIleLeuLysArqVal 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: seqref@qenoscope.cns.fr, Web . www.genoscope.cns.tr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 280 GluffisGluCysAsmileAspGluValLysAsmValTyrFheLysAsmPhelleProFhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26 others
1 (bases 1 to 792)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Pull-length cDNA libraries and normalization
Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                     /t:ssuc_typc-"neuroblastoma_cells"
/lab_host-"DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /fulllength.invitrogen.com"
8 c = 117 g = 255 t = 26
                                                                                                            Genoscope - Centre National de Sequencage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                        /clone_lib-"LII_NFLOO1_NEC4"
/sex-"male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                      /organism-"Homo sapiens"
/db_xrel-"taxon:9606"
/clone-"CSODD007YA05"
                                                                                                                                   BF 191 91006 EVRY cedex - France
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-026-459A-2 (1-928) x ALS63757 (1-792)
                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1043.00
84.538
81.898
21.748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          148 C
                                                                                       Contact: Genoscope
                                                                                                                                                                                                     792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          http:/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Rest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RASE COUNT
  REFERENCE
                       AUTHORS
                                                                 JOURNAL.
                                                                                                                                                                                FEATURES
                                            TITLE
                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
```

```
Research Center (DKEZ); Email s.wiemann@dkiz' heidelberg.de;
sequenced by BMEZ (Biomedical Research Center at the Charite,
Berlin/Germany) within the cDNA sequencing consortium of the German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 14-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryoja, Metazou, Chordata, Craniata, Verfebrata, Buteleostomi,
Mammalia, Futheria, Primates, Catarrhini, Heminidae, Homo.
1 (bases 1 to 605)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Znote "Vector: plriplEx2; Site_1: StilA; Site_2; SfilH; cDNA collection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pieuse contact the KZFG. Ressourcemention, Heatmen 6, 14659
Berlin Charlottenburg, GERMANY: Email: clone:rzpd.de.
Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cloue from S. Wiemann, Motecular Genome Analysis, German Caneer
Korbitet.K., heyer.Å., Mowes.w., weil.B. and Wiemann.S.
ESF (Koebrer.K., Beyer.A., Mewes.H.W., Weil.B. and Wiemann.S.)
Onpublished (1999)
                                                                                                                                                                                                   420 hysAspiledlyfyrilePhetysGladysPheAlatysAlaVal51y51nGlycysVal 439
                                                                                                                                                                                                                                                                                                                                     251 AAGGALWIKGGALACWIYITIAAAGAGAAAIIIGGIAAAGCIGIGGGAGAGGGIIGIG 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     449 ChulledlySerdluArqlyHJSLeuGly--ValArqleufyHJYArqValMetGluS 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 459 etMet LeutysSer GluGluGluGluBrqLeuSer HeGluAsnPheSer Lyst eut.euAsn - 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         THE CARGATITATION AND AND A STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF THE STATEMENT OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     479 AspAsnIlePheHisMetSerLeuLeuAlaCysAlaLeuGluValValMetAlaThrTyr 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      71 AMAGGMITHCAFAIGHGATAATAGGGGGGGGGGGGAATTTGTAATATA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ALSOGER THOSE BY STREET BY CONTRACT BY THE BOLDER OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONTRACT DESCRIPTION OF SERVICES CONT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           this close (DKEZP-119692) is available at the EEPO in Berlin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Am Klopterspitz 18a D 82152 Martinsried, Germany
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This is the 5' sequence of the clone insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone lib-"ili (synonym: blcc2)"
/dev_stage "adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     179 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo_sapiens"
/db_xrof_faxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                lone - "DKFZp (13P092"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              106 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /Lab host "DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No si sequence available.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AL599633
AL599633.1 GT:15162921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1,160 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1047,00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100,00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . 7 7 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21.628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Korbirer K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genome Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nome Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         499 SerArdSer 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11 GCAGTAAGT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         J. Office from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aliquinent Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S.A. I.W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NOT LINITED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PREMISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MESHELL 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALLESKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOHNSON L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KELLIKEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AL5599683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Z [ ] 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIL * I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \geq
```

```
Dias Neto,E., García Correa,R., Verjovski Almeida,S., Briones,M.R., Nagai,M.A., da Silva,W. Ji., Zado.M.A., Bordin,S., Costa,F.F., Goldman,G.H., Carvalho,A.F., Matsikuma,A., Haia,G.S., Simpson,D.H., Brunstein,A., deoliveira,P.S., Hucher,P., Jongener,C.C.,V., o'Haro,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Sonza,S.J. and Simpson,A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST 12 JUN 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   694 bp miRNA ilicar ESI 12-JHN 200-
RID 610642 210200-014-006-015642 Bobby sapiris cENA, mKNA sequence.
BE082846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Motazoa, Chordata, Craniara, Vertebrata, Euteleostomi.
Mammalia: Eutheria: Primates; Catarrhini, Hominidae: Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andat, 01509-030, Sao Paulo SP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Shotgun sequencing of the human transcriptome with edg expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361 CAACCITCAGAAAFCIGATTICCIAITTAACAACIGAATAAAAAAAAAAAA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541 CGAGTAATGGAATCCATGCTTAAATCAGAAGAAGAACGATTATCCATTCAAAATTTTAGC 600
                                                                                                                                                                                                                                                                                                                                                                                                                                       315 GluAspLeuSerLygArqTyrdluGlulleTyrLeuLygASpLeuAspAlaArq 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  375 ValarqThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAsp 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   415 HebeutysargValtysaspileGlytyrHePhetysChutysPheAlatysAlaVal 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  435 GlyGlnGlyCysValthulleGlySerGlnArqTyrLysLead, ValArqLeaT, 1771 454
                                                                                                                                                                                                                                                                                                                                                       61 AATTITATAGGTTTTATGAATTCTGTGGAGTTGTAACATGTAATGGACTTGGAAGHT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                455 ArqValMetGluSerMetLeuLysSerGludludludleuSerIledluAsnPheSer 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               355 ArgthrProArglysSerAsnLeuAspGluGluValAsnValliethethethisthiltill
241 AGAACACGACAAAAAGTAACCTGATGAAGGAGGGATGTAATTCCTCCAA'N'N'ACTC'A
                                                                                    295 Asnehet LebrophoMerAsnSey LeudlytteuVat ParsetAsnellyt oubros/buvat HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI HILLI 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               335 LeuPheLeuAspHisAspLysThuLeuGluThrAspSerIleAspSerPheGluThrGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301 GTTAGGACTGTTATGAACACTATCCAACAATTAATGATGTTTTAAATTCAGGAGTGAT
                                                                                                                                                                         1 GAAGIICICIGIAAAGAACAIGAATGIAATAIAGAIGAGGGAAAAAIGIIIAIIICAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                395 GinfroSerGluAsnLeulleSerTyrFheAsnAsnCysThrValAsnProLysGluSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Proc. Natl. Acad. Sci. D.S.A. 97 (7), 4491-4496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-026-459A 2 (1 928) x AL599644 (1 605)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BE082846.1 GI:8473151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 694)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20202664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              475 Lys 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601 AAA 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NOTHINITIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HE082846/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AMESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDILINE
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     : TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
```

Brazil

```
271 Thr ArgiletteCluValLeuGystysStuffsCluCysAsnileAspCluValLysAsn 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Us-09-028-459A-2 (1-928) x AW583181 (1-623)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Rest Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MA 02138
                                                                                                                                                                                           AW583181
                                                                                                                                                                                                                                                                                                                                                                 human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Source
                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HASE COUNT
                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                    RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                     AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred.
                                     Email: asimpson-ludwig.org.br
This sequence was derived from the FAPESP/LITE Bloom Canner Genome-
Project. This entry can be seen in the following URL
(N°C) Cown lasts of Privatibles gettind: prof. 872-813 810000.02-21644-1)
                                                                                                                                                                                                                                                                  /db_xrcc="taxon9606"
/clone_lib="BT0642"
/not="ngo" nain: libraty was made by cloning products derived
from ORESTES PCR (U.S. Letters Patent application No. 196
/716 - Ludwig Institute for Cancer Research) profiles
                                                                                                                                                                                                                                                                                                                                                                                                                      into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions. 1
3 129 : 127 g 226 t | others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      526 PheAspitheTyrfysVallIncluSerPhellefysAlaGluClyAsmouthrargGlu 545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            406 AsnCysPavalAshProtysClaSerTetoulysArgValtysAsplacPyTyr116 425 :::11111111111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     426 PhotyechutysPhoAlatysAlaValGlyGlnGlyGysValGlutloGlyGorGlaArg 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 446 TyrLysLeuGlyValArqLeuTyrTyrArqValMetGluSerMetLeuLysSerGluGlu 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     456 GludrgLeuSerlleGlndsnPheSerLysLeuLeuAspdsplanllePheHisMetSer 485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         497 GAACGATTATCCATTCAAAATTTTAGCAAACTTCTGAATGACAACATTTTTCATATGTCT 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LeuLeuAlaCysAlaLeuGluValValMetAlaThrTyrSerArgSerThrSerGlnAsn 505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           477 CITGATTCTGGAACAGATTAGTCTTTCCCATGGATTCTGAATGTGCTTAATTTAAAAGCC 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           946 Met IleLysHisLeuGluArqCysGluHisArgIleMetGluSerLeuAlaTrpLeuSer 565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              966 AspserProLeuPheAspLeuIleLysGluSerLysAspAryGluGlyProThtAspHis 585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  586 LeugluserAladysProfæuAsnieu-ProfeudinAsnAsnHisThrAlaAlaAspMe 605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matchesi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lengt.h:
                                                                                                                                                                                                                                                     /organism-"Homo sapiens"
                                                                                                                                                                                         High quality sequence stop: 669.
                                                                                                                                               Seq primer: puc 18 forward
High quality sequence start: 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09 026-459A-2 (1-928) x BE082846 (1-694)
                                                                                                                                                                                                             Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.946-92
1030.00
96.338
94.958
21.478
+55-11-2704922
+55-11-2707001
                                                                                                                                                                                                                             1694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             onery Match:
Onery Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fred. No.:
                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NIC.IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ÷:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
```

```
1 (bases 1 to 623)
Mellon, D. Maadows, A. Clitton, S., Hillier, L., Marra, M., Pape, E.,
Wylte, T., Martin, J., Blistain, A., Schmitt, A., Theishay, B., Kitter
E., Ronko, L., Bennett, J., Cardenas, M., Gibbons, M., McCanu, R.,
K., Tsaqareishylli, R., Williams, T., Jackson, Y. and Howers, Y.
RashU-Harvard Pancreas ESI Project.
                                                                                                                                                                                                                                                             EST 14 MAR-2:62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Libraries were constructed by Dr. Couglas Melton
DNA sequencing by: Washington University Genome Sequencing Center
For information on obtaining a close please centert Juliana Brown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Angrean Panareas, Varior pSPOPII; Site_1: Not 1: Site_2: Sal 1: Library constructed using SuperScript Plasmid Library kit (Life Icchnologies). chwa made by Library kit (Life Icchnologies). And made by Library Site Selected by Column Hactlonalion:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This sequence new anailable true the IMAGE conduction, the clone orders contact: info@image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
                                                                                                                                                                                                                                                                                   Tailh09.yl Human Pancreatic Islets Homo sapiens cDNA clone
IMAGE:5638049 5' similar to qb:M15400 RFTINOBLASTOMA-ASSOCTATED
PROTEIN (HUMAN): qb:M26391 Mouse retinoblastoma susceptibility
Mammalia; Eutheria; Primates; Catarrhini; Nominidae; Homo.
                                                                            605 Tyttersketrovitargsortrotystystystystystyterthrangval 622
HHHHHHHHHHHHHHHHHHH
27 Platchtforottslaacattictaaaachilachageooglola 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        chigordT priming. Site selected by column its average insert size 1.08 kb. Primary library, unamplified."

93 c 109 q 186 t lothers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi
Endocrine Pancreas Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 others
                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  623
201
2
3
1
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="Human Panereatic Islets"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alisoue_type="Islets of Langerhans" /dev_stage="Adult" /lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
                                                                                                                                                                                                                                                          mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fmail: dmelton@biohp.harvard.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Seq primer: -40RP from Gibco
High quality sequence stop: 430.
Location/Qualifiers
                                                                                                                                                                                                                                                             623 bp
                                                                                                                                                                                                                                                                                                                                                                              protein (MOUSE),, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone-"IMAGE:5638049"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (brown@fas.harvard.edu)
                                                                                                                                                                                                                                                                                                                                                                                                       AW583181
AW583181.1 01.7266125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4.16e-91
1016.00
98.078
97.108
21.188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tel: 617-495-1812
Fax: 617-495-8557
```

```
Maria,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dabuque,T., Gersel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Kore,B., Schellenberg,K., Moore,B., Wallenberg, S., Lennon,G., Soares,B., Wilson,R. and Waterston,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Timear EST 27-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        washing the source mammary_gland, NMLMC Miss missuring conditions and source mammary_gland, NMLMC Miss missuring conditions massing the standard massing conditions and source massing massing profession (HUMAN); quence, retinablastand susceptibility profession (MOUSE); mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    430 eAhatysAhaValsTyslnsTyspsValGlafleSTySerGlnArqTyrLysLeaGlyVa 450
                                                                                   291 VallyribetysAsnibetleProBeMetAsniSerLeuGlyLeuValThrSerAsnGl 310
                                                                                                                     64 GTT1ATT1-AAAAATTITATA-3CTTTTATGGTGTGTGGGGCTGTGGAACATGAAATGG 122
                                                                                                                                                                                                  410 yteaProGluValGluAssLeuSerLysAraTyrGluGlalleTyrLeuLysAssLysAs 330
                                                                                                                                                                                                                                                             12.4. ACT I CAGAGGI I CAAAA ICT I I CT AAACGA FACGAAAA I FATO'T I AAAAA YAAGA - 18.2
                                                                                                                                                                                                                                                                                                                        (4) pleuAspAlaArqLeuPheLeuAspHisAspLysThrLeuGluThrAspSerIleAspSe 350
                                                                                                                                                                                                                                                                                                                                                                                18 3 FCTAGATGGAAGATTATTTGGATGATGATAAAAGTCTTGAGACTGATTCTATAGAGAG 24.2
                                                                                                                                                                                                                                                                                                                                                                                                                                           450 TPheGluthrellnArgthrProArgtysSerAsnLeaAspGluctuVatAsnVat116Pr 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24 \pm 11 TTGAAAGACAGAAAGGAAAAAGTAAGGTTAATGATGAAGAGGTGAATGTAATTGC<math>\pm 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          470 obroHisThrProValArqThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAs 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (90 nSerAlaSerAspillaProSerGlaAsnLeurHeSerTyrPheAsnAsnCysThrValAs 410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  410 netolysdiaset HeleniysArdValiysAspi lediyiyri Herbelysdiniysph. 4 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.2.4. POPAAAAGAAAUTATAOTGAAAAGAGTGAAGGATAGAGATAOTOTUTAAAGAGAAATT 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               484 TGCTAAAGCTUTGGGACAGGGTIGTGGAAATTIGATGAGGGGATAGAAAGTFGGAGT-542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       450 lArotheuTyrTyrArotValMetGluSerMetLeuLysSerGluGluGluArgLeuSerIl 470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  54 f TOGOTTGIALTACOGAGIAAD GAAAGGITAAATCAGAAGAAGAAGATTAIGCAT 602
                        * ACANGANTATIGANGTICICTGIAAAGAACATGAATGIAATATAGATGAGGTGAAAAAT 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4444 Forest Park Parkway, Box 8501, St. Louis, MC 63108
                                                                                                                                                                                                                                                                                                                                                    Washington University School of MedicineP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1996)
Contact: Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The WashU-HHMI Monse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Washii HIHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA764485.1 GE:2814242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      470 octnAshPheSertigsLen 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 603 TCAAAATTTTAGCAAACTT 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 871)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               414 286 1800
414 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ashow ashor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NET LINITED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA76348570
Dodus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROVISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSTON
KLYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PESTILI 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HINNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        71 11 E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             I NAME INT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3.805
                                                                                      5
                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                           \sum_{i}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \bar{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \widehat{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \frac{1}{2}
```

This clone is available royalty free through LLNL , contact the

Email: mouseest Watson.wustl.edu

```
polylinker; Ist strand chNA was prepared from mannerly quant tissue from a lactating founder, and was then princed with a Not 1 oligo(di) prince. Double stranded chNA was lighted to Eco RI adaptors (Pharmacia), disrested with Not I and cloned into the Not I and Eco RI siles of the modified pT7T3 vector. Library is normalized. Library was constructed by Hento Scarce and M. Falima Honaldo. "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /cloinc_fib="Soarcs.mammary qlaind_NMiMu;"
/sex_"fomale (lactafing)"
/fissue_type="mammary qlaind"
/fissue_type="mammary qlaind"
/fissue_type="mammary qlaind"
/fistue_vector.pd7TU Pac (Pharmacia) with a modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HITTHE THE FILE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR THE FOR TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               475 ystleuteuasnaspasn Herheltismet Ser Leuteualafysalateus) navatvatm 495 HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILLER HILL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  535 helletysAlaGluGlyAsnteufhrArqSluMetiletysHistouGluArePysGluH 555
IMAGE Consortium (intogimage.llnl.gov) for further information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        356 ThrProArgLysSerAsh TeuAspCluGluValAshVallLeProProBrsThrProV 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    375 alArgThrValMetAsmThrlleCinGinLeuMetMetileLeuAsmSerAlaSerAspd 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               395 InProSerGluAsnLeufleSerTyrFbeAsnAsnCysThrValAsnFroLyssHuSerf 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  744 GCCCATCCGAAAATC11G11GCCTCCCTTCCA1AT1G1GCGTTAGGTCAAAGAAAAAA1C 685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    115 leLeuLysArgValLysAspileClyTyrileP&cLysCluLysPheAlaLysAlaValG 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      584 TCCIAGGAGCITAAAGGIIGIGIGGGAGCTIIIAAAAGAGAGGGIIGIIAAAGAGIGIGG 628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                435 TyGleClyCysValGluffeClySerGleArqTyrLystaeClyValArgtacaTyrTyrA 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               455 rqValMetGluSerMetLeuLysSerGluGluGluArqLeuSerfleGluAsnPheSerL 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          504 CACTOCTAAATGACAACATCTTTCATATGTTNTACTGGCCTGTGTTGAAGTTGTAA 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   495 etalalhrTyrSerArgSerThrSerGluAshLenAspSerGlyThrAspLenSerPheP 515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            515 rofrpileLeuAsnValLeuAsnLeuLysAlaPbeAspPbeTyrLysValifedinSerp 545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 884 CGTGGATTCTGAACCTACTTAATTTAAAAGCCTTTGATTTTTACAAGTGAATTGAAGTT 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Season Values
                                                                                                                                         Seq primer: -28ml3 rev2 El trom Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                                                                                                                              /organism-"Mus musculus"
/db_xrel-"taxon:10090"
/elone:"IMAGE:1247665"
                                                                                                                                                                                                                 High quality sequence stop: 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-026-459A-2 (1-928) x AA763485 (1 871)
                                                                                                                                                                                                                                                                                   Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.45e 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1013.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 960. 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          74.488
                                                                                                                                                                                                                                                                                                                                            .871
                                                                               MGI:661353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                                                           sontce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HASE YOUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.:
                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CRICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>2</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
```

```
cy %5 isArgileMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLygG 575

35 isArgileMetGluSerLeuAlaTrpLeuSerProLeuPheAspLeuIleLygG 575

36 alocation and an accompact of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state of a state
```

Search completed: January 19, 2003, 05:05:07 Ldb::lmo:: 2072.11 secs

```
Copyright (c) 1993 - 2003 Compuger Ltd.
```

oM nucleic nucleic search, using SW model

Pon on: January 16, 2003, 15:29:22 ; Starch time 2029.61 Seconds (Wilhout alignments) 18469.506 Million cell updates/sec

Liffe: US 09-026-459A-28
Forfier Score: 4455
Sequence: 1-0000TGALGRADGAPAGROGG.....AAARGAGARTATRGAPAGR 3455

Scoring (able: IDENTITY_NUC Gapop 10.0 , Gapext 1.0 Sourchod: 16154066 sogs, 8097243456 rogiduos

Total number of hits satistying chosen parameters: (2408132

Minimum DB seq length: 0 Maximum DB seq length: 2000000000 Post processing: Minimum Match 0% Maximum Match 100% Listing lirst 45 summaries

Dafabase : ESL:*

em_qss_other:* em dss hum: * em_dss_inv;* • nld_ssp_mo 4:11v_88p * · uh i _ssp_ma **⊷**ա"ժՑՑ"աՊա •ш_est I un: * em_estin:*
em_estin:*
em_estov:* em_estpl:*
em_estro:*
em_hte:* ⊬m estom:* em_estham:* em_estba:* qb_est4:* qb est4:* est5:* ab hte:* db_dss:# qb_estl:* 1

Prod. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

em_dss_pro:*

		Description	AKC17246 Mus museu	BM450031 AGENCOURT	BM561083 AGENCOURT	By439221 AGENCOURT	HU220275 ACDMCOURT	RM475603 AGENCOURT
SUMMARIES		<u> </u>	9 1364 11 AKS11.246	BM4 500 41	BM561083	BQ439221	HODDODYS	HM475603
		Ŧ	: ::	-	~	14	Ξ.	-
		Query Match Sength DB 1	1364	1023	1051	1081	88	1001
	*	Query Match	5.74	26.3	26.3	8.47	2.4	17.7
		Score	1.676	910.2	40.6.4	H5.6	844.8	786
		Person I t		٠;	~	7	ŗ	÷

HMS4SHRJ AGENCELRI		ALC: 77011 DATE: 1011 301	BCLLZZZZ AGENGLORI	[836.1056.1 6026.11848	ALS6 (757 ALS6 3757	18757 o476 652591312	HM466194 ACIENCOURT	BMA53724 AGENCHIRI	B1868459 603492340	BE5-49278-60106,4567	RG616219 602644717		BEOR2846 RC2-R1064	AW583181 (allho9.y	Al.599644 DKFZp414P	BG25.454.4 602364278	AL599105 DKF2p414G	AA76.4411 VW54a04.1	AW368234 CM3 H1018	AA76.4485 vw54h01.1	A1646048 vw54a16.x	AWS82967 1408e08.y	AL692790 DKFZp4141	AG120941 0KFZp7620	MS941246 MR0 H1015	AV715543 AV715534	BF144857 601790443	BII51568 602916108	AA258255 2159404.1	BG149050 un88c01.y	AW502887 UT HF BN0	BET68095 QV4 HT051	BI8211116 604045541	BM456728 AGENCOURT	FIS26982 402927177	A1646097 vw54h07.x	BF934784 RC3 HT094	A1094215 qb04a02.x	ALSOBRES DREZPSISE
BM545881	3r - u - q	C		: BG610661	ALS6 4757	HG570456			B1868359	BE534278	: BG616219	. HM264009	HE082846	AW584181	AL599643			AA76 4411			~			<					<							<	HE934784	A1093215	AL598766
1122 13	7.77			2T + 28	5 762	767 12		835 13			681 12					355 15		914 9		871 9		598 10			597 12		734 12							2083 13	734 13			457 9	5 786
21.8	2.15) d	5.021	70.7	50.5	20.0	20.0	19.6	19.1	18.6	18.6	17.9	17.8	17.5	17.5	17.3	16.8	16.6	16.4	16.2	16.0	15.3	15.3		15.0	14.9	14.8	14.6	14.3	14.1	14.0	6.4	13.9	13.8	14.7		14.3	14.2	() 주
752.4	A 20.6		7.20.6	699.6	698.2	6.02.2	8.169	678	660	643.6	642.2	617	614	605.2	605	\$1965	580	575.2	566.4	558	CN En En	530.2	530	875 876	516.8	513.2	512.2	505.2	493.8	9.0	484.4	8	480.2		~	15	459.2	457	457
7	Œ	0 0	5	0.1	c 11	C 1	13	+	1.5	16	17	ن د	c 19	20	. 21	er ev		c 24	25	c 26		78	58	≎	ت د	C# **	3.3	34	35	36	4.7	د 38	39	40	4 1	4.2	*	c 44	4.5

ALTONMENTS:

RESULT 1

AKO11246

LOCUS

AKO11246

AKO11246

LOCUS

Mus musculus lu days embryo whole hody chwa, kiken tuli length
CENTION Mus musculus lu days embryo whole hody chwa, kiken tuli length
Sequence.

AKO11246

AKO11246.1 GI:12847243

KEYWORDS

MACO11246.1 GI:12847243

KEYWORDS

AKO11246.1 GI:12847243

KEYWORDS

GIONE_LIDSRIKEN TULI-LENGTH CHICHED MOUSE CONTINUARY
CHONE:2600017M22.

OKGANISM Mus musculus

ELKARYOGA: Metazoa: Chordata; Craniata; Vertebrata; Enteleostomi:
Mammalia: Eutheria: Rodentia; Sciurodnathi; Muridae; Murinae; Mus
AUTHORS

CATHILE High-efficiency full length cloud clouding

Mammalia: Eutheria: Rodentia: Sciuroanathi: Muridae: Murinae: Mus AUTHORS
TILLE
High-efficiency full length chan clouing
JOHNAL
MEDLINE
B144-614
B1549-635
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-646
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B164-66
B16

11042159

PUHMED

```
Add. K. J. Alexas E. Abahira. S. Akhara I., Asas, H., Atai, A., Arakasa, T., Baldarelli, R., Bono, H., Brownstein, M., Bult, C., Carninci, P., Fukuda, S., Fukunish, Y., Fuuruc, M., Hansaski, T., Hara, A., Hayatsu, N., Hill, D., Hiramoto, K., Hiracka, T., Hori, F., Hume, D., Imotani, K., Ishii, Y., Itah, M., Isasa, M., Kasukawa, F., Kato, H., Kadai, J., Kojima, Y., Konuda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Nishi, K., Namura, K., Numazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Quackenbush, J., Salto, H., Salto, R., Sakai, K., Sanc, H., Sasaki, P., Schimil, L., Shibata, K., Shibata, Y., Shiraki, T., Sasaki, T., Sosako, Y., Suraki, M., Tagawa, A., Tafahashi, F., Inner, T., Tojima, Y., Toya, T., Yamamura, T., Yamanaka, I., Kananaka, I.
                                            Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Shii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaquchi, S., Ikeqami, T., Kashiwaqi, K., Fujiwake, S., Inoue, K., Iogawa, Y., Izawa, M., Ohara, E., Watahiki, M., Ohorda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Gidazaki, Y., Kira, M., Saha, S., Kawai, J., Kirki, Y., Muramatsu. M., Inouc, Y., Kira, A. and Hayashizaki, Y., Kirki, Y., Integafated sequence analysis (RTSA) system-18d format Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Holmann, M., Hume, D. A., Kamiya, M., Lee, N.H., Lyons, P., Marchionni, L., Mashima, J., Mazzarelli, J., Mombaerts, P., Nordone, P., Ringwalli, M., Rodriguez, I., Sakamoto, N., Sasaki, H., Sato, K., Schonbech, C., Seya, T., Shibata, Y., Storch, K. P., Suzuki, H., Ioyoroka, K., Wang, K. H., Weitz, C., Whittaker, C., Wilming, L.,
Shibata.K., Itoh,M., Aizawa,K., Nagaoka,S., Sasaki,N., Carninci,P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kawai. I. Shinaaawa. A. Shibata, K., Yoshino, M., Itoh, M., Ishii, Y., Arakawa. T. Baca, A. Fukunishi, Y., Konno, H., Adachi, J., Pukuda, S., Alzawa, K., Izawa, M., Nishi, K., Kiyosawa, H., Kondo, S., Yamanaka, I., Saito, H., Okazaki, Y., Odjobori, T., Bono, H., Kasukawa, T., Saito, R., Kadofa, K., Matsuda, H., Ashburner, M., Hatalov, S., Casavant, T., Fletschundun, W., Gasterland, T., Gissi, C., Kinu, H., Nochiwa, H., Ruhi, P., Lewis, S., Matsuo, Y., Nikaldo, I., Pesole, G., Guarkenbush, T., Schriml, H., Stanbli, F., Suzuki, R., Tomita, M., Manner, L., Washio, T., Sahi, K., Okkido, T., Furuno, M., Aono, H., Haidarilli, R., Harshid, Hake, J., Hofelli, D., Hojunga, N., Carninci, P., de Benaldo, M.F., Hrownsteir, M.J., Hult, C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Physical and Chronical Popularity (FEREN). Laboratory for Constant Exploration Research Group, RIKEN Communic Sciences Center (GSC), RIKEN Vokohama Institute; 1.7-22 Susehiro cho. Incumirku. Yokohama. Standawa 230-0045, Janualingenome-reseasc.riken qo.)p, ORLihttp://ten.one-reseasc.riken.go.)p,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Piken Genomic Sciences Center and Genome Science Laboratory in RIKEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wynshaw-Boris, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S. and Hayashizaki, Y.
Functional annotation of a full-length mouse cDNA collection
Nature 409 (AML), AMF 690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (10-101-2000) Yoshihide Hayashizaki, The Institute of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Please visit our Web site (http://genome.gs/.liken.go.jp/) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ., Fujita,M., Gariboldi,M., Gustincich,S., Hill,D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Yoshino, M. Muramatsu, M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Yasunishi,A., Yoshida.K.
Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 1364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        URL: http://wen-me/us
Pax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fletcher,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21085660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11217851
      AUTHURS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PLHMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TORRAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDITAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTH ES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     J. STENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MELS LINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEFEKENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOHENA
                                                                                                                                                                                                                                                                                                                                                                                                                                       TILLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C. MMICNE
```

Division of Experimental Animal Research in Riken contributed to propare mouse tissues. First strand cDNA was primed with a primer

```
RTCELIYLTQPSSALSTEINSMLVLKISWITFLLAKGEVLQMEDDLVISFULMLCVVD
YFIKESPPALLREPYKTAAI PINGSPPTPPRRQNPSAPIAKQI ENDTRIIEVLCKEHE
CNIDEVKNVYFKNFIPPINSLGIVSSNGLPEVESLSKRYEEVYLKNKGLBARLELDHD
                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib="FIKEN full-leng'h enriched mouse cPWA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /translation - "MPPKAPRRAAAEPPPPPPPPPPPREDDPAQDSGPHELPLARLEFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ELEEPE-LALÖÖKLKVPDHVRERAWLTWEKVSSVDGTLEGYTÖKKKELWGTGTFTAAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DI.DEMPETETELQKS1 ETSVYKFFIDI.LKE1.DTSTKVIDNAMSRIJ.KKYNVI.CALYSKI.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KTLQTDPIDSPETERTPRKNNPDEEANVYTPHTPVRTVMNTIQQLMVILNSASDQPSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            69 ACCIGATIFITACIFICATIFICAÇABATITAAAGATACCACATICATCIFICAGACACACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                129 ITGGTTAACTIGGGAGAAAATTICAICIGIGGATGGAATAIGGGAGGITATATICAAAA 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               354 TTGGTTAAGTTGGGAGAAAGTTTCALCCGGGGAIGGAATCCTGGAAGGALATALTCAAAA 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       249 GLIÇAÇILLI AĞTGAĞGTAZAAAAAÇATAŞAAALÇAĞLĞLĞCATAAALTGTTTAACTT 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       369 GIAIGAIGIAFIGIFFGCACTCIFGAGAAATIGGAAAGGACAIGIGAACTIAIAIII 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                594 GTATAATGTGTATGTGTAGTAGAGAAATIASAAGGGAGGGGGAAGCTTATATATTT 653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         489 TEBRATONATITITATIAGOTAAABGGGAAGIATTADAAATGGAAGAIGATGIGGIGAI 548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0: Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9 GENERAL MENERAL CONTRACTOR OF CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   429 GACACACACACACACACATACATATA ACTICAAATACATTOTICIOCATTICIOCACAACITICI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            294 ACCCGAATITATIGGATIAIGTGAAAGTIAAAAGIAGGAAGGATAAAGATGACGAATGAGAAAGAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         189 GAAAAAGGAATTGTGGGGAAATTGTGTTIAITGGAGGAGGAGTTGAGATGAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 529.4, DB 11, Length 1964;
Pred. No. 2c-170;
0; Mismatches 126; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note-"data source:MGD, source key:MGI:97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 others
                                                                                                                                                                                                                      /db_xref-"FANIOM_DB:2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       346 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                 /dev_stage="10 days embryo"
|. .1364
                                                                                                                                                                                                                                                                            /db_xref="MGD:MG]:1905260"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /protein_id="BAB27493.1"
/db_xref="GI:12847244"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref-"MGD:MGI:97874"
                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                /clone "zeeggil7M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           307 q
                                                                                                                                                                              /strain-"C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NI.1 SY FNNCTVNP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 evidence: ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /codon_start
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26.3%,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene-"Rbl"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .>1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                306 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                               .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  putative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
HOSt: SOLR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      404 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 1005;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Seery Match
                                                                                                   acrice.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                       PHATTIPES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
```

```
1024 bp mkNA linear EST 05-FEB-2002
AGENITORIE 6393544 NIH MGC_72 Bomo sapiens rDNA clone IMAGE:5528037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryola: Metazoa: Chordata: Craniata; Vertebrata; Euteleostomi;
Mammalia: Euthoria: Primates: Catarrhini; Hominidae: Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            954 CGAGGTTCTCTGTAAGAACAACAAGGTAATATAGATGAGGTGAAAAATGTTTATTTCAA 1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               U74 IGAAAGICITICTAAACGCIAIGAAAGAGTTAAGTTAAAAAGAAGATTAGATGCAAG T133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           969 GAGAAMAMAMAGAAAAAGTAAGGTTGATGAAGGTGAAFGTAATTGCTTGGGGGGGTGG 1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1029 AGTTAGGACTGTTATGAACACTATGGAACAATTAATGATGATTITAAATTCAGCAAGTGA 1088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11.44 ACTGTTTTGGATCATGALAAAACACTTCAGATGGTGGTATAGACAGTTTTGAAACAGA 1193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cond Library Preparation: Life technologies, Inc. (CDA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequenciad by, Astrocart Bioscience Corporation Clone distribution: MGC clone distribution incommation can be found through the L.M.A.G.E. Consortium/LLNL at:
              809
                                                                                                                                                                                                                                HTE THE THE HELL HELLELLE THE HELLELLE HELLELLE HELLELLE HELLELLE HELLE 
                                                                                                                                                                                                                                                                                                                                                                 669 GOGAGITCAGAACAGAAGTGCACGGATAGCAAAAAGAACTAGAAAATGATAGAAATTAT 728
                                                                                                                                                                                                                                                                                                                                                                                                                      789 AAATELIALAGGU FLARGAALIGUCEGGAGFEGFAAAGALGAALIGGAGAGE 848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    849 DIAAAATOTITICTAAANGAITACGAAAGAAATITATOTTAAAAATAAAGATCTAGATGCAAG 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 1024)
WiH MOT http://www.noisskapz/
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                          774 (TCATITCAGIAAIGTUIGIGIAGIIGAGIIGAGIITIAIIAAGIIGEGAGCIGGIGGAGI 833
549 TTCATTTCAGTTAATGCTATGTGTCCTTGACTATTTATTAAAGTGTGAGGTGCGATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            729 HGAAGI ECEGIGTAAAGAACA EGAATGFAATATAGATGAGAGAAAAA EGFETATETCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     909 ALTATELLEGALGALGALAAAAGTCLLCAGACTGALGTATAGAGAGTLLLTGAAAGAGA
                                                                                                                                                                                609 OTTOAAAGAACATATAAAACAGCIGTIATACCGALBAATGGTTGACCTCGAACAGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOBS ICARCCTICAGAAAAACTCCATATCTTAACAACTGCACAGTGAATGC 1139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Plafe: LLAM12204 row: d column: 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dissue Produrement: ALCC/DCID/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /ordanism·"Homo sapiens"
/db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence stop: 643.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Localion/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: eqapbs ramail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BM450031.1 01:18439071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     57, mENA Sequence.
RM450031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROMISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AND ESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEFFERENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PESULI 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HM4'5003]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSIEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'AMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SAUM'E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        =
                                                                                          Ē
                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       \stackrel{>}{\sim}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \stackrel{>}{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>:</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
```

```
Atissue_type "melanotic melanoma"
//dat_most "build (phage resistant)
//note="ordan skin; Vector: pSW 2890F0; Site 1: Not1;
Site_2: Sall: Cloned uniditectionally. Primer: oliqo dl.
                                                                                                   Average insert size 2 kb. Tibrary constructed by Lite Technologies."
                                                                                                                                                                                                                                                     2043 CAAAGIGAAGAATATAGACTIIAAAIICAAAAICAIIGIAACAGCAIACAAGGATCTTCC 2102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2881 GITATTIATAGAAGATTGAAAATCTTGTGTAAATCTCTGTGTGTTTTAAAAGTTGTTGTAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                7877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2463 ATGTAACACCACCCTGTGCTPAAAGAAGTGCTFAAAGGAAGGAACPPFFTAAAFT 2522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      78.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2823 AAAA1G1GCAGATGCAAT1GTTT GGJ1GATTTTIAAGTTAT1GAAATGTTAGTTAT1 2880
                                                                                                                                                                                                                                                                                                                       2442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601 AAAGCAGAAAATGAAIGAIAGCAIGGAIACCICAAAACAAGAAAGAAAAIGAGATCTCA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661 GGACCTIGGTGGACACTGTGTACACCTCTGGATTCATTGTCTCTCACACATGTGACTGTA 720
                                                                                                                                                                                                                                                                                       Sabs
                                                                                                                                                                                                                                                                                                                                                         61 TCATGCTGTTCAGGAGACAITCAAACCLGIIIIGAICAAAGAAGAAGAGIALGATTCTAT
                                                                                                                                                                                                                                                                                                                                                                                                           2283 TCCTAGTTCACCCTTACGGATTCCTCGACACATATTATTLCACCCTGAAGAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2583 AGGAGAGTOCAAATTICAGGAGAAACTIGGAGAAAIGGGTIGIATTCGAAGAGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    264 CAAASTASAAAA GAA EGA EGA ASTA 163A TATTI GAAACTAACTAAGAAA CLACITA LITETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2703 GGACCTTGGTGGACACTGTACAAAATTGTGATTGTTATTGTTTATAAATGTAATATA
                                                                                                                                                                                                                                                                                                                                                                                         2163 TATAGLATICIALAAGI GGIGTTCAT GOAGAGAG GAAAAAAAA LATTU TUTAGTATOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181 PECCACCAGGCCCCLACCI FGFCACCAATACCTCACATTCCTCGAGAGCCTTTACAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 ATATAAAATTTCAGAAGGTCTGCCAACAACAAAAATGAGTCCAAGATGAAAA ICTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                             2223 THOCASCOAGOCCCTACCTTGTCACATACCTCACALGCCLCGAAGCCCTTACAACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 14; Length 1023;
                                                                                                                                                                                                                         Indels
                                                                                                                                                                                     Ouery Match 26.3%; Seore 910.2; DB-14;
Best Local Similarity 95.2%; Pred. No. 1.1e-166;
Matches 972; Conservative 0; Mismatches 43;
                                                                                                                                     28] 1
                 /clone lib-"NIH MGC 72"
/Clone "IMAGE:552Hu47"
                                                                                                                                 197 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              211 C
                                                                                                                                     3.44 a
                                                                                                                                   BASE COUNT
                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                           ô
                                                                                                                                                                                                                                                                                                                                                       ď
                                                                                                                                                                                                                                                                                                                                                                                           ें
                                                                                                                                                                                                                                                                                                                                                                                                                           <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ਜ਼ੋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
```

```
EST 20-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Library constructed by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ċ.
                                                                                                                                                                                                                                                                                                                                                                    HM561983
AGENCLORI_6566133 NIH_MGC_67 Homo sapions oftwa of one iMage;5550005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Enkaryota: Metazoa: Chordata: Craniata, Vertebrata, Esteleostomi, Mammalia: Eutheria: Frimates: Catarrhini, Hominidae: Home. L. (bases: Lo 105).
NIH-MGC http://mar.nvi.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Primer: Oligo dT
                                                                                                                        2941 TEGITI-OTOTOTOCAAAGTAAAATGOTGIGOTITAFGGATAGIAAGAATGG-- OOOT 2996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       [20] AAANNINIGGGAFAGGGTHGTFFGAAATTGGATGAGGGGATAGAAACTTGGAGTTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1261 IUGIALIACCGACTAATGGAAFGGTTAAATGAAGAAGAAGAAGAITATGGAFTGAA 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1321 AATTITAGGAAACTICIGAATGACAACATITITGAIATGICITIAIDAGGIGGGGGT 1380
                                                               cDNA Library Preparation. Life Technologies. Inc. clos. h. Library Arrayed by The T. M.A.G. F. Consortium (LLNL) bload sequencing by Americant Riescience Corporation Close distribution. MCC close distribution information can be
841 GITALITATACCAGA FIGAAAAFGTTGTGTAAATFCTGGAATTAAAAAGGTTGTAGFAGA 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*issur type "retinablastems"
/lab_host="DH10B (phage-resMarsht)"
//nole="Origin="Page yes" yet or from the page yet plant.
Site_2: Sall; Cloned unidirectionally. Primer: Oliqo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2; Gags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 AIANOTHTGGRAAAAGGHTTGTGTCGAAATTGGATCACACAAAAGTTGGAGTFCGC KD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 909.4; DB 13; Length 1051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13; indeds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tours through the I.M.A.G.E. Consortium/like at. http://image.lln.gov m.column. 18 High quality sequence stop: 737. Loration/Oualiflers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred No 1 6e-166;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Average insert size 1.75 kb.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C. Mismatrobos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     //organism="Bown sapiens"
/db_xref="taxon:9606"
/clone="iMAGE.5550905"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone_lib="NIH_MGC_67"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: cqapbs remail:nih.qov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    197 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                      BMS51083.1 GI:18806043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Technologies.
221 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26.3%;
98.4%;
                                                                                                                                                                                                                                                                                                                                                                                               57, mRNA sequence.
BM561002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 948, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Rest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          F 010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   лишап.
                                                                                                                                                                                                                5-57 A 3057
                                                                                                                                                                                                                                                         1021 A 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Source
                                                                                                                                                                                                                                                                                                                                                                                        NOT TRILLIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     - ROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . N. ()
                                                                                                                                                                                                                                                                                                                                                                                                                                 A. Y.E.S.T. N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JEAU KNAL
                                                                                                                                                                                                                                                                                                                                                RMS6.Libs4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                           PESHL1 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERS I: N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1111E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N. CIX
                                                                                                                                                                                                                                                                                                                                                                    15018
                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
```

```
EST 24-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BQ439221
AGENCOURT_7766562 NIH_MGC_92 Bomo capiens cDNA clone IMAGE:6015480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryola, Metabba, Chordata, Grapiata, Verrebrata, Euteleogtomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                              4441 TESPUTENCATOSATE PAAAGGETTAATITAAAGGETTGATTITACAAGG 1500
                                                                                                                                                                                                                                                                                                                                      1561 CARIGLAARAHGAARAGAALGAALGCETIGCALGGCICICAGATTAACHIALHIGAL 1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1681 CIIAAICIICCICICCASAAIAAICAGAGAGAGAAIAIGIAICITICICCIGIAAGA 1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1861 GTARCTICARCTICAGACCAGAAGCCAIRGAAICTACCTCTTICACTGITTAI 1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1861 AAAAANSTSTATOSSTASTITTI 1930TTATOS AAAAAALITGIGAAGG 20TICTGIGT 1920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 981 INTERACTORIGACIACIAN PARTITICA CANTANA INTERICIA DE CANTENIA D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2041 ISTAAASISAASAAIAIASIASAASITAAA-AITCAAAAECAFITAAAGAGAIAIAGAAGAI 2099
1381 GAGGTTGTAAFGGGGAGATATAGAAASTAGATGTGAGAAFGTTGAFTGTGAAGAGAGAL 1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1741 TCTCCAAAGAAAAAGGTTCAACTAGGGGIGTAAAF, CTACTGCAAATGGAGAGAGAGAA TBUU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1921 GAGGAGGAGAATTAGAAGALAKGAKGGAGGGTIFLGGAGGAGAGGAGGAGAALGAG 1980
                                       241 TTCTCTTTCCCATGGATTCTGAATGTGCTTAATTTTAAAAGCCTTTGATTTTTACAAAGTG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361 CGAIGIGAACAICGAAICAIGGAAIGCCIIGCAIGGCICICAGAIICACCIIIAIIIGAI 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721 GAGGAGGGAGAATTAGAAAAAAAGALGTGGAGGGTTFLGGAGGAGAGGCGGGAGAATGAGA 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 1081)
NIH-MGC http://myc.nci.nih.gov/.
National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2100 TOCHÇATGOTGTTÇAGGAGATTGAAAGE1G1-1:1GATGAAAGAAGAGGAC 2151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA Library Preparation: Life Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HC439221.1 C1:21178297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5', mRNA sequence.
BQ439221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BQ439221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ç
                                                                          â
                                                                                                                                                                       Š
                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                습
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        검
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         òγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>></u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>ئ</u>
ئ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
```

```
// Strong Type-"combryonal carcinoma, cell line"
// Ade host-"DHIOM (phage-resistant)"
// Ade and the strist Vertor: prove-SPORT6; Site_1: NotI:
// Site 2: Sall: Cloned unidirectionally: oligo-df primed.
// Average insert size 2:5 Fb library enticked for
full length clones and constructed by lite Technologies.
// Note: This is a NH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2557 GANGCAGATGGAAGTAAACATCTCCCAAGAGAGTCCAAATTTCAGCAGAAACTGGCAGAA 2616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2617 ATGACT ECTACTEGAACACGAAAAGCAGAAAATGAATGATAGCATGGAFACCTCA 2676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2677 AANAAGAAAGAAATGAGGATGTGAGGAGCTTGGTGGAGACTGTGTACACGTGTGGGATT 2736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27.47 CATTGECTOTOACAGAEGEGACTGTAACTTTCCCAAGTECTGTTATGGCCACATTTA 2796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2797 ATA EEFEMAGEET ETT 1910AATATAAAATGIIGGAGAFTIGEETTIGGIIGATTIGGII 2856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2857 AAGOOALIGAAALGIFAGIGAFIGIFATTIATAGAAGAFIGAAAAFCFIGTGFAAAFGG 2916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2917 TGGGATTFAAAAAGTGGTAGGAGATTGTTTGGTGTTGGAAAGTAAAATTGGTGTGTTA 2976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2977 IGGATAGTAAGAATGGCCCTTAGAGTGGGAGTGCTGATAACCGAGGGCTGTGTGAGTAGTT 3036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8037 BGCCHCHIIIGIAGCAIAIAGGIGAIGIIIGCICTIGIITITIAITAATITAIAIGIATA 3096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0097 TITITITAATITAAGATGAANACCUTTAGAAAATGIGGGAAGIATGITGGAAATGCAA 3156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3.15.7 TTGAFTGACTGGGGATTCACGAAAAFTATGGTGAAGTGTTCTGGAAAAATGGATATTAT 3216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4217 TAGAAATTAGAAAAAALTACTAATTITACACATTAGATTITTATTITACTATTGGAATGT 3276
                              DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLML at:
PLATES LLAMM 3.21 row: k column: 01
High quality sequence stop: 732.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | FELLET | F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601 ITTGATTGACTGCCCATTCACCAAAATTATCCTGAAACTCTTCTGCAAAAATGGATATTAT 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sdeO ()
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CONA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            * March 24.8%; Score 856; DB 14; Longth 1081; Local Similarity 99.1%; Pred. No. 3.6e-156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Prod. No. 3.6e-156;
0; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                        /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone "IMAGE:6015480"
/clone_lib="NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xret="!axon:9506"
                                                                                                                                                                                                                                                                                                                             Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 892; Conservative
                                                                                                                                                                                                                                                                                                                                                                                1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ouery Mateh
                                                                                                                                                                                                                                                                                                                                                                                     30.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WISTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
```

```
BO220275
ACENYTURE_7522629 NIH_MOT_92 Bollo Sapietrs CORA CORE INADEGRADAS22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /elone_lib="NIH_MGC_92"
//issuc_type="fembplyonal rareinoma, cell line"
//abchost="MHIOB (page-resistant)"
//note="Grqan: testis: Vector: pCMV SPORT6; Site_l: Notl:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryeta; Metazoa; Chordata; Craniata; Verreduata; Enteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Site_2: Sail; Cloned unidirectionally; oliqo dT primed. Average insert size 2.5 kb. Library enriched for full-lendth clones and constructed by Lite Technologies. Note: this is a NHLMMS Library."
                                                                                       3277 GATATACIGIGIGITGITITAIAAAAITIIG°IIIIAALIAAAAAAAAAAGAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3497 GAACTTACTGATTATTTTCTTCATCCAACTTATTTTTAAATGA GGATTATTGATAGT 4459
                                                                                                                                                                                                                                                                            333 AGFATAAGCAFAFGATACTAFCAFACHGGAACAGAFFFCAFACTFCAGAAFFFAAAA 3396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at: http://mage.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 TIANACTCTCACCTCCCATGTTGCTCAAAGAACCATATAAAACAGCTGTTATACCCATTA 120
661 TAGAAATTAG-AAAAAAITACIAATIIITACAIITATIIITACIAIIGGAAICT 719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HITTELLETTELLETTELLETTE TELETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELlettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 881)
NIH MGC http://mac.uci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        527 AAATGGAAGATGATCTGGGTGATTTCAGTTAATGCTAATGTGTCTCTTGACTATTTA 986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  647 ATGGTTCACCTCGAACACCTAGGCGAGGTCAGAACAGGAGTGCACGGATAGCAAAAAAACAAC 706
                                                                                                                                                                                    720 GATATACHGTGTTGTTTTATAAAATTTTGTTTTT ATTAAA1AAAAGTGGAAAGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels 22 daps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 AAATGGAAGATGATCTGGTGATTTCATTTCAGTTAATGCTTGTCTTGTCTTTTTA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Hiosefence Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                       24.5%; Score 844.8; DB-14; Length BBL; 99.0%; Pred. No. 5.5e 154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      264 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plate: LLAM13287 row: e column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism-"Bomo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          High quality sequence stop: 690.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xrel="taxon:9606"
/clone="IMAGE:6044522"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: eqaphs-ramail.uih.qov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                155 q
                                                                                                                                             BQ220275.1 GI:20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     49.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                145 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5', mRNA sequence.
BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 871; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           313 а
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEPTMITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           다
-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
Оу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                    ä
                                                                                                                                                                                                                                                                                                                                                                    8
```

```
linear EST 05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGENINURI_6480007 NIH MGC 92 Home sapiens cDNA clone iMAGE:5575683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia: Eutheria: Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1001)
HIH MGC Ettp.//mgr noi nib.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ].ii)7 AIGIAA: FOTFOACACACACFOAACHTAGGACFGFFFATGAACACACAFFFFGAAGHAAFGA 1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .067 IGATITTAAATTCAGCAAGTGATCAACCTTCAGAAAATCTGATTTCCTATTTAACAACT 1126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1247 AACTIGGAGTIGGCIIGIATIACGGAGIAAATGGAATGCATGGIITAAAATGAGAAGAAGAA, 1468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1907 GATTATCCATTCAAAATTTTAGCAAACTTCTGAATGACAACA-TTTTTCATATGT CTTT 1364
                                                                                                                                                                                                                                                                                                                                                                                                +47 ETATAGACAGTITITGAAACACAGAGAAPACPAGGAAAAAAAAACTAACETFGATGAAGAGGTGA LOOK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                187 AAGAGAATITITG LAAAGT GIGGGATAGGGILGIGIGIGTAAAT FIGAA FYAGGAFAA 1246
                                                                                                                                                                                                                                                                                                                                                                                                                          481 ATGTAATICCTCCACACACACTTAGGACTGTTATGAACACTATCCAACAATTAATGA 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              281 GATIAICCAITCAAAATITIAGCAAACTICTGAATGACCACATITTTCATAIGTT A40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA Library Proparation: Life Technologies, inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL.) BNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be
                                                                                                                                               241 ANGTGAAAAATGTTTATTTCAAAAATTTTATACCTTTTATGAATTCTTGGACTTGTAA 300
                                                                                                                                                                                              827 CAICTAALGGACTIOCAGAGCTICAAAATGTTTGTAAAAGATAGGAAGAAAAATAAATTA 886
                                                                                                                                                                                                                                                401. GATGTAATBASACTTFFCAGAGGGTTGAAAATFFTTAAAAFGATAGGAAGAAATTTAFFTTA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   501 GCACAGTGAATGCAAAAGAAAGTATACTGAAAAGAGTGAAGGTATATAGGATATAGATATATAFAFAGTTTA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661 AGGAGAATITGCTAAAGCTGTGAGAATAAGGITGGGGGGAAATGGAGACACAGGATAAA
257 AGGIGAAAAATGITIATITGAAAAIIIIAFAGGIITGAIGAAFIGIGGAGIIGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RIH MCC Lttp.//mgr noi mib grw/.
National Institutes of Health, Mammalian Gene Collection (MCC)
                                                                                                                                                                                                                                                                                               BB7 AAAATAAAGAICIAGAIGCAAGATTATITIIGGAICAIGAIAAAACTCTICAGACTGAIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1365 ATTGGCGTGCTCTTCAGGTTGTAATGGCCACATATAGC 1404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    III NA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1001 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: cgapbs remail.uih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BM475603.1 GI:18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REMAISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTH-IKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INCIRNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HUNERHALIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BM475503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHAMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            X. . . . .
                                                 2
                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                              ت
                                                                                                                                                                                                                                                                                                                                                                                                  \leq
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ė
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \hat{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
Ξ
```

```
Site_2: Sall: Cloned unidirectionally: olido-di-primed.
Average insert size 2.5 kb. Library enriched for full-length clones and constructed by tife technologies. Note: this is a NIII.MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             974 PAPPAGBABABBABBABBI IGA IGABABAGBBABBBAATTOCTOCACACACACICCACTIA 1033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  554 TTCAGTTAATGCTATGTGTCGTGACTATTITATTAAACTCTCACCTCCCATGTTGCTCA 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 614 AAGAACCAFATAAAACAGCFGTTATACCCATTAATGGTTCACCFGGAACACAGGGGAG 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         343 AAGAACATATAAAACAGCTGTTATACCCATTAATGGTTGACCTCGAACACCAGGGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              914 TTTTGGATCATGATAAAACTCTTCAGACTGATTGTATAGACAGTTTTGAAACACAGAGAA 973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          643 TITIGGATCATGATAAAACTCTTCAGACTGATTCTATAGACAGTTTTGAAACACAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.3. AGTPANTTGATACCAGTACCAAAGTTGATAATGCTATGTCAAGACTGTTGAAGAAGTATGA 1.0.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 375 IGTATIGITIGCACICIICAGCAAAII-GGAAAGGAJAIGIGAACIIAIAITIIGACAC 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     434 AAPGGAGTEPGATATPTAPTGAAATAAATTGTGGATTGGTGGTAAAAGTTTGTTGGA 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     674 GICAGAACAGGAGIGCACGAATAGCAAAACAACIAGAAAAIGAIACAAGAAIIAAIIGAAG 733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        794 TTATACCITITATGAATTCICITGGACTTGIAACATCTAATGGACTICCAGAGGTLGAAA 854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      854 ATCTITCTAAAGGATACGAAGAAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTA; 31*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              315 AGAAATTGATACCAGTACCAAAGTTGATAATGCTATGTCAAGACTGTTGAAGAAGTATGA 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             403 CTPAGAAPAGGAGTGPAFGGATAGPAAAQAAGTAGAAAATGATGATGATGATGAAGAATTATTGAAG 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   523 TTATACCITITATGAAITCICITGGACITGTAACATCIAATGGACITCCAGAAGTLGAAA 582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3; Gaps
                                                                                                                                                                                                                                                                                                                                       /note "Organ: testis; Vector: pCMV-SPDRI6; Site_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                734 TICTCTGTAAAAAAAAATGTAATATATAGATGAGGTGAAAAATGTTTATTICAAAAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        164 ANCHORGOAGTERGATATOTACTGAAATAAATTOTOGATGGTGGTAAAASTTTGTTSGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone_lib="NIH_MGC_92"
//issue_lype="embryonal carcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22.7%; Score 786, DB 13, Length 1001; 95.1%; Pred. No. 1.46:142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
found through the I.M.A.G.E. Consortium/LINE at: http://imaqe.llnl.gov
Plate: LLAM12326 row: f column: U4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                 "crganism "Homo sapiens"
                                                                             High quality sequence start: 17
High quality sequence stop: 734.
                                                                                                                                                                                                                                    /clone="IMAGE:5575683"
                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                         /db_xref-"taxon:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 833; Conservative
                                                                                                                                                           .1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Osery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local
                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ζź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ڃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      심
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    년
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G.
```

```
AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Al.597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
1
                      a
                                                          င်
                                                                                            å
                                                                                                                                  ŝ
                                                                                                                                                                      9
                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                â
                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        out three ozaries, from females ranging in age from 38 to 49 yo. Library is oligo-dr primed and directionally cloned (EcoWs site is destroyed upon cloning). Average insert size 2.1 kb, insert size range 1-8.5 kb. Library is normalized and enriched for full-length clones and was constructed by 0. Gruber (Invitrogen). Research Genetics tracking code 086.*
                                                                                                                                                                                                                                                                                  BM545881
A)ENCOURT_6505183 NIH_MGC_125 Homo sapiens cona clone IMAGE:558B245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zinde-"ornan: ovary (pool of 3); Vector: pCMV-SPORT5;
Site, 1: EcoRV (destroyed); Site_2: Not1; RNA source pool
                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota: Metazoa: Chordata: Craniata; Vertebrata; Enteleostomi;
1034 GGACTGTTATGAACACTAFCCAACAATTAATGATGATTTTAAATTCAGGAAGTGATGAAC 1093
                                                                        1094 CLICAGAAAALCESALLE COLAHIITAACAACIGGAGAGGAATGGAAAGAAAGTAL 1151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24.22 | FORGRACHTOLGAGARGTECAGAAATAAATGAGATGTATGTAACAGCGACCCTGTG 2481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cONA Library Preparation: Life Technologies, Inc., CLNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencies by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240 ITOTAGACTICITGAGAAGITCGAGAAAATAAATGAGAIGGIAIGIAAGAGGGGACGGIGIG 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              400 CLCAAAAGAAGIGCIGAAGGAAGGAAGCIGCIAAAGCAGIGAAAAAAGIAGGGITTGAT 359
                                                                                          National Institutes of Health, Mammalian Gene Collection (MDC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21.8%; Score 752.4; DR 13; Length 1122;
95.6%; Pred. No. 4.8e-136;
stive 0; Mismatches 32; Indels 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 others
                                                                                                                                                  1152 ACTIDAAAAGAGTGAAGGATATAGGATAGATTAA 1187
                                                                                                                                                                                      883 TATACCOCAAAAAAAAAGCCIAACCAATATACCAATAA 918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plate: LLAM12359 row: a column; 14
High quality sequence start; 48
High quality sequence stop: 773.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /ordanism="Homo sapiens"
/Ab xrot="raxon:9606"
/orone="IMAGE:5588245"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zelone lib: "NIH_MGC_125"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 1122)
NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: eqapbs:ramail.nih.gov
Tissue Procurement: Invitrogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
1. .1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            216 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Jah bost - "PHICH"
                                                                                                                                                                                                                                                                                                                                                          RMS45881.1 GI:18778465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ر
196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1999)
                                                                                                                                                                                                                                                                                                                    5°, mKNA sequence.
BM545881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                      Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          $6,0 a
                                                                                                                                                                                                                                                                                                                                                                                                    11 1701-471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Curry Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3001103
                                                                                                                                                                                                                                                                                                      NOTIFIEL
                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HASE COUNT
                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEFEKENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JUNENA!
                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                HM545HH1
                                                                                                                                                                                                                                                PESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1111.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TNEMM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N
N
                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                          25
                                                                                                                                                  5
```

```
linear EST 14 AUG 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Poustka,A., Wellenreuther, R., Mewes, H.W., Weil, B. and Wiemann, S.).
EST (Poustka,A., Wellenreuther, R., Mewes, H.W., Weil, B. and Wiemann, S.).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Enteleostom);
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2722 GTACACCTCTGGATTCATTGTCTCTCACAGATGTGACTGTATAACTTTCCCACACTTCTGT 2781
                                                                                                                                                                                                                                                                                                                                                                                                       2782 TTATCCCCACATTTAATATCTTCAGGTCTTTTTTTTTTAAAALG1GCAAATGTAAAATT 2841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2842 GTTTGGGTGATTCCTAAGCCACTTGAAATGTTAGTCATTGTTATTATACAAGATTGAAA 2901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2902 ATCITGIGIAAAICCIGCCAIIIAAAAGIIGIAGCAGAIIGHHCCH THCCAAACHAA 2961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8022 CCTGTCTGACTACTTTGCCTTTTGTAGCATATA3GTGATGTTTGCTCTTTTTAT 4081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8082 TAATTTATA - TGTATATTTTTTAATTTAACAIGAA - CACCCTTAGAAATGTGTGTA - 4138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3199 TGCAAAAAT -GGATATTATTAGAAAATTAGAAAAAAATTTACTAATTTTACACATTAGATTT - 4257
                                                                             2602 GAGAAACTGGGAGAATGACTTGTACTGGAAGAAGGAATGTAAAAAGTAGAATGAT 2661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3962 AATTGCTGTTTFATGGATACLAAGAATGGCTCFAGAGGGGAGTCTGALAACCGAG 3021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          600 TTATGGCCACATTTAATATCTTCAGCTCTTTTGTGGATATAAAATGTGCAGATGCAATT 659
720 ATCHTGTGTANATCCTGCCATHTANANGTTGTACAGATTGTTTCCTCTTTTCCAAACTAA 779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              899 TAATITATAATGGATAITITITITAATITAACALGAANCACCCTTAGAAAATGTGTCCTA 958
                                                                                                                                   Elec 2) Hones appiens con clone
                                                                                                                                                                                                                                                                                                                          2662 AGCATGGATACCTCAAANAAGGAAGAAATGAGGALGTCAGGACCTTGGTGGACTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Max-Planck-Institute for Molecular Genetics
Threstrasse 73, 14195 Berlin, Germany
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                   DKFZp31300816_r1 313 (synonym. h.)
DKFZp31300816 5', mRNA sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ds 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3258 IATITIACTALIGGAAICIGAIATA 3282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1078 TATITIACIATIGAAAAACGGAATA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ALS97811.1 GI:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Poustka A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Department Lehrach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
```

```
0
                                                                                                                                                                                                                                                                                                                                                                                                   /note="Vector: pTriplEx2; Site_1: SfilA; Site_2: SfilB; cDNA-collection"
                                                                                                                                 Heidelberg/Germany) within the cDNA sequencing consortium of the
                                                 This is the 5' sequence of the clone insert clone from S. Wiemann, Molecular Genome Analysis, German Cancer Research Center (DKF7); Email s.wiemann@dktz- heidelberg.de,
                                                                                                                                                                                     This clone (DKEZp31300816) is available at the KZPD in Berlin. Pleases contact the PZPD-Pessourcenzentrum, Heubnorwey 6, 14059 Berlin-Charlottenburg, GERMANY: Email: clone*rzpd de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2013 ANTIATGATGTTTTTATGTATGGATATGGAAAGTGAAAGATATAGACTTAAATTCAA 2072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZELE GAAGALELATATITGACCCCTGAAGAGTCCATATAAAATTTCAGAAGGTCTGCCAACACC 2372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24.3.3. IGAGAAGTTPCCAGAAAATBAAYTCAGATGGTAYGTAACAGGGACCGTGTGGTCAAAAGAAC 24.92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.73 AATOATTOTAMAGAAGATAMAGAAGATOTTOATOOTGATAGAGAGATTOAAAAATATTOAAAAATATOA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2253 ACCICAPALICCICGAAGCCCITIACAAGITTICCTAGTTCACCCTTACGCATTCCTGGAGG 2312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181 AATTATGATGTGTTGGATGTGTGGATATGGAAAGTGAAGAGATATAGAGCTTTAAATTGAA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481 GAACATGTATATTTCACCCCCGAAGAGTCCATATAAAATTTCAGAAGGTCTGGGAACACC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (3) I TELGALTAAAGAAGAGGAGTATGATTCTATTATAGTATTCTATAACTCGGTCTTTCATGCA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 9; Length 727;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                           sequenced by DKFZ (German Cancer Research Center,
                                                                                                                                                                                                                                                                                                                                     /clone_lib="313 (synonym: hlcc2)"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -
                                   Email: poustka@mpimg berlin dahlem.mpg.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21.0%; Score 725.4; DB 9; 99.9%; Fred. No. 8.7e-131; ive 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                        198 t.
                                                                                                                                                                                                                                                                                   /organism "Homo sapions"
/db_vrof="+avon-0606"
                                                                                                                                                                                                                                                                                                                       /clone-"DKFZp31300816"
                                                                                                                                                                                                                                               Location/Oualifiers
1. .727
                                                                                                                                                                                                                                                                                                                                                                                                                                        130 g
                                                                                                                                                                                                                                                                                                                                                                               /lab host-"DH10H"
                                                                                                                                                                     sequence available.
                                                                                                                                                 German Genome Project
No si sequence availat
+49-30-84131623
+49-30-84131128
                                                                                                                                                                                                                                                                                                                                                                                                                                        161 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hest Local Similarity 99.9
Matches 726; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                          2 18 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              coery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                        INI
                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ė
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ξ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ã
```

```
PG222227
AGENCOURT_7566045 NIH_MGC_92 Homo sapiens cDNA clone IMAGE:6041563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ä
                                                                                                                                                                                                                                                                                                                                                                                           Fukaryvta; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 880)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note-Torgan: testis: Vector: pCMV-SPORT6; Site_1: Not1: Site_2: Sail: Clored uniditectionally, wilgo di primed. Average insert size 2.5 kb. Library enriched for lull-inforth clones and constructed by Life Technologies. Note: this is a NIH_MGC Library."
cDNA Library Preparation: Lile Technologies, Inc. cDNA Library Arrayed by The TR A R Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at: Plate: LLAM13279 row: I column: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       376 CLATTOTTTGGGCTGTTGAGGAAATIGGAAAGGACAICTGAACTIATAITIGACACAA 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              436 CCCAGCAGTTCGATATCTACTGAAATAAATTCTGCALIGGTGCTAAAAGTTLCTTGGATC 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               496 ACALTTELALTAGTTAGTTAAAGGAAGTATTACAAATGGAAGATGATCTGGTGATTTCATTT 555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             i, daps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GTATTGTTTGCAATTGGGAAATTGGAAAGGACATGTGAAGTTATATATTTGACAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 720.6, DB 14, Length 880;
Fred. No. 7.3e-130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="embryonal carcinoma, cell line"
/lab_host="5H10B (phage resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9, Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact, Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib."NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop: 606.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone-"IMAGE:6041563"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: egapbs-r@mail.mih.gov
Tissue Procurement: AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                           BODDDDD/
HQDDDDDD7.1 GI:D0403627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20.9%;
98.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Brat Local Similarity 98.77
Matches 737; Conservative
                                                                                                                                                                                                                                                                    , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .880
                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                   2553 AGATGAA 2559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      321 a
                                                                                                                           721 AGAIGAA 727
                                                                                                                                                                                                                                                                                                                                                       human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Source
                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                          12227
                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                     RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                           SUDGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ÷ òy
                                          9
                                                                                     ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ā
```

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |RG5||065|
| 6026||1848E| NIH_MGC,60 Homo sapiens cDNA clone IMAGE:4737634 5''
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      976 CPACGAAAAAGTAACCT IGA IGAAGAAGG IGAATGTAATTCTGGGGGAGAGAGTFAGG T035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1036 ACTOTTATGAACACIATCCAACAATTAATGATGATTTTAAATTCAGCAAGGATCAA-CC 1094
                                                                                                                                                                                                                                                                                                                                                                                                                                                              241 GAACCATATAAAACAGCTGTTATACCCATTAATGGTTCACCTCGAACACCCCAGGGGGGGT 300
                                                                                                                                      421 AFACCTITIAGAATFCTCTCGGACTIGTAACATCTAATGGACTTCCAGAGGTTGAAAAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541 TEGGATCATGATAAAACTCTTCAGACTGATTCTATAGACAGTTTTTGAAACACAGAGAACA 600
616 GAACCATAFAAACAGCIGITATACCCATIAATGGTTGACCCGAACAGGGGGAGGT 675
                                                                                                         626 CAGAACAGGAGTGCACGGGATASCAAACAACTAGAAATGATACAAGAATTATTGAAGGT 735
                                                                                                                                                                                                                 7.6 CTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTATTTCAAAAATTTT 795
                                                                                                                                                                                                                                                                       461 CTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTAT1TCAAAAAATTTT 420
                                                                                                                                                                                                                                                                                                                           796 ATAPPETTTA IGAA FLOTICEIGGACTIOGRAAGA FCHAATIGGAC FFOCAGAGTIGAAAAFF 855
                                                                                                                                                                                                                                                                                                                                                                                                                                     856 CITECTAAACGAAGAAGAAATITAECITAAAAATAAAGAICTAGAAGAIGAAGAITAITI 915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               916 TTGGATCATGATAAAACTCTTCAGATTCTATAGAGAGTTTTGAAACAGAGAGA 975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA Sequencina by: Incyte Genomics, Inc. Plone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NIE WEST BETY NOTED TO A CONTROLL OF THE WAR THE GENERAL CONTROLL (MGC) Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Znote "organ: prostate; Vector: pDNR LIB (Clontech);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cDNA Library Preparation: CLONETECH Laboratories, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mammalia; Euthoria; Primates; Catarrhini; Hominidae; Homo.
1. (bases 1 to 823)
                                                                                                                                                                                                                                                                                                                                                    found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissur_type="ademocarcinoma"
/lab host "DHIUB (11 phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plate: LLCM1605 row: o column: 11
High quality sequence stop: 709.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .823
/organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib-"NIH_MGC_60"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       824 hp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone-"IMAGE:4737634"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1095 TTCAGAAAATCTGATTTGCTATTTAA 1121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721 ITCAAAAAATCTGATTTTCCTATTTA 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: eqapbs remail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ussue Procurement: DCID/DDP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BG610661.1 GT:13662032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BG610661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HG610661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          THURST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NOTINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OEGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PEFFIKENC'E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTH RS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             163610561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N.W.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S-INCE
                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \frac{2}{3}
```

```
Site_1: Stil (atcracterace), Site_2, Stil (adventlateace), Double-stranded clNA was prepared from cell line kNA.

J. Bouble-stranded clNA was prepared to meet line kNA.

and 3' adaptors were used in cloning as follows: 5'

adaptor sequence: 5' -KNSGNTAINIGGO 3' and 4' adaptor

sequence: 5' -ALICIA-MASGCGAGAGGGCGA ALG GL(30)BN 3'
                                                                                             sequence: 5'-AIGTASABSCGASSCGASTAN AGG 01(30)BN 6' (Where H = A, C, or G and N = A, C, or Or, or T). Average insert size 1.5 kb (range 0.9-4.0 kb). 14/15 colonies contained unserts by PCR. This library was enriched for lull-length clones and was constructed by Churtech Laboratories (Palo AILO, CA). Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                              2583 AGGAGAGICCAAATIICAGGAGAAACIGGCAGAAIGACIICIACIGGAATAAAIGA 2642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2883 TATITATACAAGATIGAAAAATCIIGIGAAAATCCIGCCATITAAAAAGTIGIAGCAATT 2942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3123 TAGAAAATGTGTCCTATCTTCCAAALGCAAFFTGALTGACTGCCCATTCACAAAA 3182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240 ATTITACACATTAGATTITATTITACIATIGGAATCIGATATACIGIGIGGITGGITTITAT 3299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2643 AAAGCAGAAAATGAATGATAGCATGGATACCTCAAACAAGGAAGAAATGAGGAFCTCCTCA 2702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2943 GTTTCCTCTCCAAAGTAAAATTGCTGTCTTTATGGATAGTAAAAATGGCCCTAAAGG 3002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8065 IGFFEGGPCTFGFFFFFAIAATFTALAIGFGFATAFFFFFTAATFFFAAFFFAAGAFGAAGGGG +122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3183 TTATCTGAACTCTTCTGCAAAAAIGGATATTATTAGAAAATT AGAAAAAATTACTA 4249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3300 AAAATTTTTGCTTTTAATTAAATAAAAGCGAAGCAAAGTATAACGALAIGALACTALCA 3359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 AAAGCAGAAAATGAATGATAGCATGCATAGCTCAAAGAAGAAGAAATGAGGATGTGA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361 GTTTCCTCTTCCAAAGTAAAJIGGGGGGGGGGAAGAAJAAGAAAGGGGCGAAAGGGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661 ATTITACACCAT-TAGATICAATTACTALIGGAATCIGATATACTGIGGTIG TTCA 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               718 TAAAATTIGCTITAACIAACATACAAGGIGGAAGCAAAGIAT-AGGAIAIGAIACIATGA 776
                                                                                                                                                                                                                                                                                                                                                                                                  sdep 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 TAACTITCCCAGGITCTGITTATGGCCACATTIAAIATCTICAGCTGTTTTGGGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         003 GGASTCCTGAIAACCCAGGCCTGTCTGACIACITIGCCTTCTTTGTAGTAGTAGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2763 TAACITI FOCCAGGITF FIGITI AT GGCCACAT FI FAATA FC FI CACHTI TI TI TI TI GAATA FI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2823 AAAATGTGGGAATTGTTTGGTTGATTGCTAAGGCACTTGAAATGTTAGTCAFTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20.2%; Score 699.6; DR 12; Length 823; 94.8%; Pred, No. 8.8e 126;
                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3360 TACTACTGAAACAGAIIICAIACCTCAGAAIGIAAAAGAACT 3401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     777 IACTATIGAA - CAGALICAJACCICAGAA GLAAAGAAGCI BLE
                                                                                                                                                                                                                                                                                                                                                                      Pred. No. 8.8e 126;
                                                                                                                                                                                                                                                                        271 t
                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                        142 q
                                                                                                                                                                                                                                                                        148 C
                                                                                                                                                                                                                                                                                                                                                                                             Matches 779; Conservative
                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
                                                                                                                                                                                                                                                                        262 a
                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          걾
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              े
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
```

```
was primed with a Not1-oligo(d1) primer. Five prime end enriched, double-stranded cDNA was digested with Not 1 and eloned into the Not 1 and Eco RV sites of the PAVSPORT 6 vector. Library was normalized Library was constructed by Lite Technologies. Contact : Frug Liand Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          by Lite Technologies. Contact. Fend Liang Life
Technologies, a division of Invitrogen 9800 Medical Center
Drive workey! (1) Maryland 208ch, USA Pax : (1) 391 610
8371 Email : friang@lifetech.com_URL.
                                                   EST 16-FFB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /hote-"Organ: brain: Vertor: prMVSPOPT 6: 1st strand opNA
                                                                                                                                                                                                                                                Eukaryola: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi: Mammal.ia: Eutheria: Primates: Catarrhini: Hominidae: Homo. 1 (bases 1 to 792) Li.W.H., Grupor, C., Tossoo, J. and Polayes, D.
                                                                        AL563757 LTI_NFL001_NRC4 Homo Sapiens CDNA clone CSOppOn7YA05 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      384. AAGTAAGGTTGATGAAGGGGGGTGAATGTAATTCCTCGAAAGGGGACGGGGAGGAAGGGGGTATAT. 1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6.24 IAAAAQAGTGTIATAGCGATTAATGGTTCAGCTCGAACACCCAGGCGAGGTTAGAAAAG 6.83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          79.2. TAAAACAGCIKLIFALACCCALTAATGCPTGAGCTGGAAGAGCGAGGGGAGGCGAAGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34 GAGTGCAGGATAGCAAAACAACTAGAAATGATAGAATTATTGAAGTTGTGTGTAA 743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7.2 GAGTGCAGGGWIAGCAAGAAAYIAGAAATTGAIACAAGAATTATGAAAGTTGTGTAA 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        804 TATGAATTCTCTTGGACTTGTAACATCTAATGGACTTCCAGAGGTTGAAAATCTTTCTAA 863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       924 ICATAAAATTOTTOAGACHGATHOHAHAGACHUHUGAAAAAAGAGAGAGAAAAAAAAA 993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        192 IGATAAAACTCTICAGAYIGALICIWTAGAGAGTTTTGAAACACAGAGAGACACGAGAAA 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                          HP 191 91006 EVRY codox - France
Email: seqrefiqenoscope.cns.fr, Web . WWW.genoscope.cns.ft.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Corry Match 20.2%; Score 698.2; BR 9; Erngth 792. Bost Local Similarity 93.6%; Pred. No. 1.6e-125; Matches 23, Indels 3
                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26 of hers
                                                                                                                                                                                                                                                                                                                                             Full length cDNA libraries and normalization unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type-"neuroblastoma cells"
/lab_host-"bH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       http://fulllength.invitrogen_com"
                                                                                                                                                                                                                                                                                                                                                                                                                          Genoscope - Centre National de Sequencage
                                                   HKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone_lib="LTI_NFL001_NBC4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism-"Homo sapiens"
/db_xref "taxon:9606"
                                              792 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zelono-"csnmon7yA05"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5 177
                                                                                                                                                   Al.563757.1 GI:12913464
                                                                                                  prime, mRNA sequence.
AL563757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /sex-"male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    148 C
                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Genoscope
                                                                                                                                                                                                                           Homo sapiens
                                                 A1.563757
                                                                                                                                                                                                    homan.
                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFFCE
                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LNC
RESHLT 11
ALS6 475 27c
                                                                                                                                                                                                                           ReJANISM
                                                                                                                         ACCESS ION
                                                                                                                                                                                                                                                                                                 KELLKEN, E
                                                                                                                                                                                                                                                                                                                             ACT HORS
                                                                                                                                                                          KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                         I HIRNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                   LIMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RIGIN
                                                 50,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
```

```
Antimore Director plane (Figure 1) (Antimore 1); Site_1: Sfil (ggeogeteggee); Site_2: Sfil (ggeogeteggee); Site_2: Sfil (ggeogeteggee); Site_2: Sfil (ggeogeteggee); Site_2: Sfil (ggeogeteggee); Site_2: Sfil (ggeogeteggee); Site_2: Sfil (ggeogeteggee); Site_2: Sfil (ggeogeteggee); Site_2: Sfil (ggeogeteggee); Site_2: Sfil (ggeogeteggee); Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Site_2: Sit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukarjoča, Metanoa, Chordata, Craniata, Vertebrata, Enteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 767)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1164 GAAGGATATAGGATACATCTTTAAAGAGAAATTTGCTAAAGCTGTGGGGACAGGGTTGTGT 1223
                                                                                                                                               1044 GAACACTATCCAACAATTAATGATGATTTTAAATTCAGCAAGTGATCAACCTTCAGAAAA 1103
                                                                                                                                                                                                                                                                                                                                      1282 TCCATGCTIAAATCAJAAJAAJAAGAACJAITATCCATTJAAAATITIAGCAAACTTCTGAAT 1341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1224 CCAAATTGGATCACAGGGATAGAAGTTGG AGTTGGGTTGTATTAGGGAGTAATGGAA 1281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BG5/0456 1707 NH_MGC_77 Homo sapiens cDNA clone IMAGE:4717874 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Phail: cgapbs-rémail.nih.gov
Tissou Proutuent. ClowfEcH Laboratories, Inc.
CDNA Library Preparation: CLONTECH Laboratories, Inc.
CDNA Library Arcayed by: The I.M.A.G.E. Consortium (LLNL.)
DNA Sequenching by: Incyte Genomics, Inc.
Close distribution: MCC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.llnl.gov
Plate: LLCM1568 row: h column: 03
High quality sequence stop: 726.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         372 GGACAYTWFCCAACAATTAAIGATGTTTTTAAATTCAGCAAGTGTTCAACCTTCAGAAAT 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     252 GAAGGATWTKGGATACWTYTTTAAAGAGAAATTTGCTAAAAGCTGTGGGACAGGGTTGTGT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NiH-Mar http://mqc/ncl.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MAC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           312 TYTGTTTTCYTWTTTTTTTACGACTGCACAGTGAATCCAAAAGAAAGTATACTGAAAAGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone-"IMAGE:4717874"
/clone_lib-"NIH_MGC_77"
/lab_host-"DH10B (Tl phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (1999)
Contact, Robert Strausborg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HG570456.1 GI:13578109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESS 10N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RPPPPNCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BG570456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       : TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LNEWNOO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOCUS
                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                        â
```

233 a

BASE COUNT

5 Ě $\frac{2}{5}$ $\mathbb{S}_{\widetilde{\mathbf{n}}}$

5

4

15 = ŝ 5 Ē 5 3 Š = 5 ä 2

```
Matches 728;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           [Coca]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HASE COUNT
JOHRNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BMA46194 Constitution 972 Ep. arkNA Closer EXT 05 FEB 2002 ATENUALE 6456973 NIH_MSC_92 Homo sapiens conA close image:5576939
                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
Eukuryota: Metazea: Chordata: Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1322 AAAADTOGAAAGGAAAGGALALAAGGALATGATAGTAGTAGTAGAAGAGATTTGATA 3381.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2903 TOTIGEGRAA POTEGOATHAAAAGERGFAGAGATEGTEGTIGEGAAAGFAAA 2962
                                                                                                                                                                                                      266 + GOATGBATACHTONANONAGGAAGAAATGAGGATGTCAAGACHTGGTGGAGACTTGGTGAGACTGTGTG 2722
                                                                                                                                                                                                                                                                                                                                                                         2724 TADACCH CHOGAIH CAIH GICH CHOT CAGAIGH CHAIA AACH HOCGAGGHICHGOIF - 2782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2783 TATEMPOTACA FLAATATOLIONACIOTI LI PELOGATATAAAA FGIGCAGAGGGAATIG | 2842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    284 § ITTGGGTGATTGCTAAGGCACTTGAAATGTTAGTCATTGTTATTATACAAAGATTGAAAA 2902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8024 CTGTGTGACTACTTTGCCTTGTTTTGTAGGATATAGGTGATGTTTGCTCTTTTTTTATT 3082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1083 AALFFALATGTATALFTTILFAAFTTAACATGAACACCCFFACAAATGTGTGTCTFA 3142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           114.4 TOT FORANA FORANT FIGAL FIGACT FOR CONTINUACINAMA TOTAL CANDARD STRUCT GARDEN GRANT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR THE STRUCT FOR TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1202 AAAAATGGATATTATTAGAAATTAGAAAAAATTACTAATTTTAGACATTAGATTTATT 3261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1262 HAMIATEGAALMEATATAMENGEGEGELIGITETAAAATTHEMITTAATTAAAF 3321
                                                                                                                                                                                                                                                                                                                                                                                                                          241 TOTTGTGTAAAFOTGGGAFITAAAAGTTGTAGAATGTTTGTGTTGCTGTGTGCAAAGTAAA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12) TATOSCHAZATITAATATCHEZAGTGHTHIGTGGATALAAAATGTGGAGATGGAATTG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301 ALTGCTGTGCTTTATGGATAGTAAGAATGGCCCTAGAGTGGGGAGTCCTGATAACCCAGGC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481 TOTACAAATGCAATTGGATTGAGTGGCCCATTCACCAAAATTATCCTGACTCTTGTGC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601 TTACTATOSSAATCTGAIATACTGTGTTGTTGTTIAIAAAAA-TITGCIITAATTAAATT 659
                                                                                                                           Caps
                                                                                                                                                                                                                                                                                     1 GNATOGALACCICAAACAAAGAAAAAAAIGAGAICICAAGAACILGGIGGACACIGIG 60
                                                                                                                                                                                                                                                       Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . 4
                                            DB 12: Longth 767;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        382 CCTCAGAATGE AAAAGAACITACITAITITICITCATCCAACITAT 3429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    719 OCTORGANGESTARGGRACHEL HILL HILL HILL 1907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20.0%; Score 692.2; DB 12; 97.1%; Pred. No. 2.4e-124; ative 0; Mismatches 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 972)
NIB MGT http://mww.ncinih.gov//.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BM466194.1 GI:18515236
                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mKNA sequence.
                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HM465194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  teallists.
                                                                                                                       Matches 747;
                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N. I.I.N.I.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CRUANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A. TESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
S.CORYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PESTILI 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PELEFEN'E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RM466.194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
```

```
/clone_lib="NHL MGC_92"
/tissue_type "embryonal carcinoma, cell line"
/lab_host="DHLOW (phage-resistant)"
/note="Organ: testis: Verlor: pOMV SPORTS: Site_l: NotE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Average insert size 2.5 kF. Library enjiched for 10H1-Tenath clones and constructed by Life Technologies. Note: this is a NHI-MGC Library. 2 others.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Site_2: Sall; Cloned unidirectionally; origo al primed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2279 TGTTFATGGCACATHAAFALCTICAGGCTTTTTGTGGATATAAAAGGGGAAAAA 2838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31.39 TCTATCHTCCAAATGCAATTIGATTGACTGCCCAFFCACAAAATTATCHLGAACTCTTC 3198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2659 GATAGCATGGATACCTCAAACAAGGAAGAAATGAGGATCTCAGGACCTTGGTGGACAC 2718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2719 TGTGTACACCTCTGGATTCATTGTCTCTCACAGATGTGACGTGTATAACTTTCCCAGGTTC 2778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2839 ATTGTTTGGGTGATTCCTAAGCCACTTGAAATGTTAGFCATTGTTATTATACAAGATTG 2898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2959 TAAAATTGCLGTGCTTTAIGGAFAGIAAGAAIGGCCCIAGGAGTGGGAGTCCGAFAACCA 3018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8019 AGGCCTGTCTGACTACTTTGCCTTTTGTAGCAIAIAAGTGAGGTGA GALGTTTT 3078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181 TGTITAIGGCCACATITAATAICITCAGCICTITITIGIGGATAIAAAAIGIGGAAAAGAA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481 TATTAATITATAIGIATATITITITAATITAAGA GAAA ACCLIAGAAAAGGGGGGGCTA 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 AFFGFFFGGGFGATFCFFAAGCCACTTGAAATGFFATFGFFATFGFFATFATATAAGATFG 300
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                   Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2899 AAAATCTTGTGTAAATCCTGCCAITIAAAAAGIIGIAGCAGAIIGIIIGCICTTCCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CATCACAAACTGGCAGAAATGACTTCTACTCGAACACGAATGCAAAAAGCAGAAAATGAAT
                                                                                                                                         eDNA Library Preparation: Lite Technologies, Inc. eDNA Library Arrayed by: The L.M.A.G.E. Consortion (LLNL) DNA Sequencing by: Agencourt Bioscience Cupporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 14; Length 972;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indele
                                                                                                                                                                                                                                                               found through the L.M.A.G.E. Consortium/LLINI at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20.0%; Score 691.8; DB 1%; illarity 96.7%; Pred. No. 2.8e-124; Conservative 0; Mismatches 19;
                                                                                                                                                                                                                                                                                              http://image.llnl.gov
Plate: LLAM12329 row: j column: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism-"Homo sapiens"
                                                           Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                      High quality sequence stop: 621.
Location/Qualitiers
1, .972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:9606"
/elone="IMAGE:5576939"
                                                                                    Email, eqapbs ramail.nih,dog
lissue Procurement; AICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
```

```
EST 05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                           HM45 (724 83 bp mRNA linear EST 05-FEH-2002 AGEN/OURL_619271* MIH_MGC_72 Hemc sapiens chNA clond: IMAGE.5528814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    octionally. Primer: Oligo dT. Library constructed by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota, Metazoa: Chordata: Craniata; Vertebrata; Euteleostomi;
Mammalia: Eutheria: Primates, Cataiihini; Hominidae: Homo.
                                                                                        (259 AIIIIIACIAIIGGAAPOPGATATAO DARG-----POGTPOPPTATAAAAPPTPOOPPTW 3313
3. 9. 1 SCAAAATGGATATTATTAGAAAATTAGAAAAAAAATTACTAATTTTACACATTAGATTTT 3258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vector prMV-SpoRT6 site_1 Not I:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1560 ACANDADAACATCCAAATCATCAAAATCCCTTGCATGGCTCTCAGATLCACTHADIBGA 1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16.20 10.11ATHAAACAATGAAAGGACCGAGAAGGACCAACTGATCACCTTGAATGTGCTTGTGC 1679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1680 TCTIAATCITCCTCTCCAGAAIAAFCACAGGGGGGGGAAIAFGEATCTTCTCCTGTAAG 1739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1740 ATCTCCAAAGAAAAAAGGTTCAAFTAGGGGTGTAAATTCTAAFGGAAATGGAGAGAGA 1799
                      cDNA Library Propatation: Life Technologies, inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LINL) DNA Sequencing by: Agencourt Bioscience Corporation Colone distribution: MGC clone distribution information can be clound through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23. EGITATITAAACAATCAAAGGGCCGAGGAGGCGACCAACHGGCTGGAATGAATGAAAGGGGTGGGC 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 835)
YHENY POLICY STATES AND MAINMALIAN GENE COllection (MCC)
National institutes of Health, Mammalian Gene Collection (MCC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sdeo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13 ACCATATAAACATCGAATCATGGAATCCCTIGGAIGGCICTCAGATTCACCTITATITGA 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9; Indels 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 835;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Znote_"Organ skin: Vector, prMV-SPOPT
Site_2: Sall; Cloned unidirectionally.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone="IMACH:5528814"
/clone_lib="NHH_MGC_72"
/fixxbc_rypc="mclanctic mclandma"
/lab_host="DHIOR" (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19.6%; Score £78; DB 13; L ilarity 100.0%; Pred, No. 1.4c-121; Gensoriating A. Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                233 t
                                                                                                                                                                                           4314 AATTAAAIAAAAGCT-OGAAGCAAAGTATAAGC 3345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       http://kaaacilnlapm
Plate: LLAM12206 row: e column: 07
                                                                                                                                                                                                                     Average insert size 2 kb.
Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tissue Procurement: ATCC/DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism-"Homo sapiens"
/db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               High quality sequence stop: 647. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: cqaphs-ramail nih qov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           137 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                       BM45:724.1 GI:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5 017
                                                                                                                                                                                                                                                                                                                                                                                                         mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . .835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapjons
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25.4
                                                                                                                                                                                                                                                                                                                                                                                                                                   BM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Marchus 678;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Querry Matich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOUTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                  NEELNITHE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HASE COUNT
                                                                                                                                                                                                                                                                                                           FESUL: 14
HM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                   A. TESSI . N
                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KLYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PERMAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F.A. 1. E.F.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N:9:4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
```

```
Pukaryota, Motaroa; Chordata, Cramiata, Vertebratu, Enteleostomi;
Mammalla, Eutheria, Primates, Catarrhini; Hominidae; Homo.
1 (bases 1 to 672)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /tissue_type-"adenocarcinoma, cell line"
/lab_host-"DH10B (phage-resistant)"
/note-"Organ: liver; Vector: pCMV-SPORT6; Site_1: Not1;
/note-"Organ: Liver; Vector: pCMV-SPORT6; Site_1: Not1;
Alte_2: Sall: Closed unidirectionally; olido-dT primed.
Average insert size 1.7 kb. Library enriched for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1860 IAAAAAASIGIAIGSSCIASCCIAICICCSSCIAAAAACACIIIGIGAACCCCIICISIC 1919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1920 TGAGCACCAGAATTAGAACATATCATGTGGACCCTTTTTCCAGCACACCCTGGAGAALGA 1979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2040 ATGCAAAGTGAAGAATATAGAATTTAAATTCAAAATGATAGTAACGGATGCATACAAGGATGT 2099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2100 TCCTCATGCTGTTCASCAGAGACTTCAAAGGTGTTTTGAAAGAAGAGGAGTALGALIG 2159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ELBERTS linear EST 11---TT-603392330P1 NIH_WCC_90 Home sapiens comA clone IMAGH:5102022 57
                                                                                                   1800 AGGAACCTCAGCCTTCCAGACCCAGAGCCATTGAAATCTACGTCTCTTTTAGTGTTTA 1859
                                                                                                                                                                                                                                                                                                                                                   cDNA Library Preparation: Lite Technologies, Inc. (LIML) CDNA Library Arrayed E. The T.M.A.G.C. Consortion (LIML) DNA Sequencing April Incyte Genemics, Inc. Consortion in the Consortion of the libribation will also distribution in the Leville Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Consortion of the Con
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   373 IGAGCACCCPAGAATTAGAACATATCATCTGGACCCTTTTCCAGGACACCCTCCAGAATGA 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     493 ATGCAAAGTGAAGAATATAGACCTTTAAATTGAAAATGATTGTAAGAGGATACAAGGATGT 552
193 ATCTCCAAAGAAAAAAGIICAACIACGCGTGTAAATTCTACTGCAAATGCAGAGACACA 252
                                                                                                                                                       253 AGGAAGGTGACGTTGGAGAGGAGGAGGGATTGAAATGTAGGTGTTTGAGTGTTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NIH Mar Birp.//mgr noi mih gov/.
National Institutes of Health, Manualian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  http://image.llnl.gov
Plate: LLAM12026 row: k column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism "Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone "IMAGE:5402622"
/clone_lib="NIH_MGC_90"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop: 668.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email, egapbs tâmail.mih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BI868359.1 GI:16042032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2220 IGHITCHACAGGCCCC 2237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   673 15711177A02A0302020 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA sequence.
B1868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ArrTitops
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BI868359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
DF
                                                                                                   ολ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ć
                                                                                                                                                                                                 를
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ.
```

```
ä
tull length clones and constructed by Life Technologies.
Note: this is a NIB_MSC Library."
a 124 c 134 g 186 t
                                                                                                                                                                                                                                                                                                                                                                                                     2321 ATALITOACOCOTGAAGAGEGGALTATAAAATITGAGAAGGGCAAGAAAAA 2380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2861 CACHGAAAIGHAGICAHGICAHHATACAAGAHGAA-AAICHIGHGHAGIGC 2919
                                                                                                                                                                                                                                                    2381 TOACTOCAAGATCAAGAATCTTAGTATCAAATGGTGAATCATTCGGGACTTCTGAGAAGT 2440
                                                                                                                                                                                                                                                                                                                                2561 CAGATGGAAGTAAACATCTCCCAGGAGAGTCCAAAATTTCAAGAAAAATGGAGAAAATGA 2620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2621 CTICTACTCGAACACGAATGCAAAAAGCAGAAAATGAATGATGGTAGGATACCTCAAACA 2680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           268) AGGAAGAGAAATGAGGATGTGAGGAGTTTGGTGGAGAGTGTGTAGAGGTGTGGATTGATT 2740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2741 GTCTCTCACAGATGTGGACTGTATAACTTTCCCAGGTTCTGTTTATGGCCACATTAATAT 2800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZBOL CITCAGCICTITITGIGATATAAAAATGIGGAGATGCAAATTGITTGGGTGATTGCTAAGC 2860
                                                                                                                                                                                                                                                                          61 TGACTICCAAGAATALAAGAATATAGAATAGAATGATGATGATGAGAGTICTGAGAAGT 120
                                                                                                                                                                                                                                                                                                                                                    481 CTTCAGGTCTTTTGTGGGATATAAAATGTGGAATGCAATTGTTGGGTGATTGCTAAGG 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301 CTTCTACTCGAACACGAATGCAAAAAGASAAAATGAATGAATGGATGGATACCTCAAAACA 360
                                                                                                                                     Indels 1; Gaps
                                                                                                                                                                                                             1 ATATTTCACCCCCGAAGAGTCCATATAAAATTTCAGAAGGTCTGCCAACAACAAAAA 60
                                                                                                                                                                                             19.1%; Score 660; DB-14; Length 672;
99.9%; Pred. No. 4.4e-118;
Live 0; Mismatches 0; Indels
                                      134 9
                                                                                                                Rest Local Similarity 99.99
Matches 671; conservative
                                          2.28 d
                                                                                                Duery Matel
                                          BASE COUNT
                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                         ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ÷.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
```

--

Search completed: Lanuary 18, 2003, 94:06:32 Tob Time : 9063.69 sees

2920 CATTIAAAAAGITGIAGGAGAITGIIITGGIGGIAAAAGIAAAAITGGIGGIAIAIGG 2979

541 CACTIGAAAIGITAGICATIGITAITIAIAAAAAIIGAAACAAICIIGIGIGIAAAICCIGC 600

FELLITELLE FELLERA AND THE FELLIC CANADA TO THE FELLITELLE FELLICANA AND THE AND THE FELLICAN AND THE FELLIC

:			-
		•	
			· · · · · · · · · · · · · · · · · · ·

	Copyright (c) 1993 - 2003 Compuges Ltd.	
oma brotein mo	nucleic search, using trame_plus_p2n model	
Рап. оп.:	January 17, 2004, 18:27:24 ; Search time 1980.03 Seconds (without alignments) 7320 547 Million cell updates/sec	
Title: Perfect scale: Sequence:	US US 026-459A-29 4614 I MOPORPERI PLANTERETE TPMORQKMNISMITSNKEEK 895	
Seoring Table;	HIOSUM62 Xdepext 0.5 Xdepext 0.5 Xdepep 10.0 Xdepext 0.5 Xdepext 0.5 Xdepext 0.5 Xdepext 2.0 X	
swar ethods	16154066 seqs, 8097743376 residues	
Total number of	Total number of hits satisfying chosen parameters: 32308132	
Minimum DB seq length: 0 Maximum DB seq length: 20	Minimum DB seq length: 0 Maximum DB seq length: 200000000	
Fost processing	Post processing: Minimum Match 10% Maximum Match 100% Listing line: 4% symmaries	

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model transparameters:

Model

```
em_dss_mus;*
em_dss_ofber;*
em_dss_pro;*
em_dss_rod;*
                                                                                                                                                                               em_qss_hum:*
em_qss_hum:*
em_qss_hum:*
                                                                                                                                                                                                               em 489 /rt.*
                                                                                                                                                                                                                                    •m.qss_mam:•
                                                                                                4b, est 2:*
4b, hte:*
4b_est 4:*
4b_est 4:*
4b_est 4:*
em_est 5:*
em_est 0m:*
        cm est bar;
em est bar;
em est hum;
em est bur;
em est ox;
em est ro;
em bre;
qb est li*
                                                                                                                                                                        4b_dss:*
atabase
```

Pred. No. is the number of results predicted by chance to have a	score greater than or equal to the score of the result being printed,	Tropic.
Chance	result	14111111
1 by	1	
icte	e 01	7
berd	Scor	Letto.
results	to the	of the t
umber of	or equal	and is derived be spaided, and the testal sector distribution
he n	t han	2
S	11 er	1.00
Ñ.	drea	s dor
Pred.	Score	and is

	Description	AKOLI246 Mus messeu	z	BGZ20275 AGENCOURT	BM475603 AGENCOURT	ALCOVELL DREED 41 40	FMAS 4724 ACENCARR	KM4 Sau 11 ACEN COURT	AA76.4411 vw54404.r	AUG. 32 1812-21 20	ME082846 RG2 BT064	Alfafors vws4alo,x	AWSB 3181 1411109.Y	AA764485 VWS4b01.1	AW468234 CM3 HT018	BIL51568 602916108	AV715544 AV715544 HG144050 nn98601 v	BF144857 601790444	ALE92790 DKP2p3141 np544978 601064567	A1646097 vw54h07.x	ALL20941 DKFEP762D	MINIONE EUROZINI MINIONE EUROZINI	BE931246 MR0 HT015	BE168095 QV3-HT051	AWSSZHR7 UI-HE-BNO	AA359836 VW54101.S	AA32.2280 ut.26e03.x AA32.2280 mm36e05 r	RM456728 AGENCOURT	AWS03514 UL HE BNO	BMRUZ736 AGENCOUR] AA359709 VW54404 S	A1606529 vb27q08.y	BFB27047 RC3 INDUZ	B1696841 603344967	AW951504 EST463674	BEZ85796 601096510 BIREMASS 6014462440			MRNA linear HTC 19 JAN 2002	Mus masseulus 10 days embryo whole hedy cENA, RIKEN tull length enriched library, close:2600017M22:rethnoblastoma 1. tull insert			ANGMENT ANGLE SACRETOR SACRE	different corrected mouse club library	lus ; Metazoa; Chordata; Craniata; Vertebiata; Enteleostomi;	roquathi; Muridae; Murinae; Mus.
SUMMARIES	ID	AK031.246	HM561083	BQ220275	BM475604	ALCOVET.	EM45.5254	BM4 500 41	AA763411	ALS6 471.7 ALS666 44	BEOBZRA6	A1546.018	AW58 1181	AA76.5485 BCSC 254.2	AW 168234	H1151568	AV715533 BG149050	BF144857	AL692790 BF549278	A1646097	AL120941	BG244088	BE931236	BE168095	AW502887	AA959836	AA072780	BM456728	AW503514	AA959709	A1606529	BF827047	H1696841	AW9514.04	ME285796 MT868359	SUMENSTA		1464 hp	embryo whole me:2600017M22		24 4	C57B1 76.13 10	length enrich	Shordata; Cran	odentia: Sciu
	DIB	-	<u>~</u>	7.4	~ .			_	s.	J 3	. 0	5	2,	~ <u>-</u>	10	~ :	2 2	17	ئر ج	. 5	ج- حق	*	=	10			- 		2 :	- -	5	<u> </u>	: ~	0	<u> </u>				5 N		8472	0.0		0.545	, (4)
	Length	1364	1051	881	1001		: ພາ ວິດ ວິດ	1023	914	75 J	694	्र (अ. (अ.	623	7 C 8 C	7.88 1.88	7.46	7.00 4.00 4.00 4.00	7.4	583 757	709	C) •	* 60 * 60 * 60	593	484	0 * C	615	11 74 9 74 12 47	2083	45.2	5 Z Z	462	4. L 2. 2. 3. 3.	651	380	425	•			us 10 d ibrary,	7	G1:1284724	rapper.	RIKEN 1	us Metazo	Eutheri
		38.5	43.6	31.4	0.67	1 0 1 0) C4 9 C4	24.1	6 . C.	6 14 0 24 0 24 0	4 C4 4 C4 5 C5	ੱ ਹਵਾ ਵ	22.0	0 e	21.2	20.8	20.8	20.5	20.3	19.2	-: ·	18.	18.6	18.3	 	9.71	17.7	17.0	16.3	15.7	15.2	14.8 8.4	14.5	14. 4	13.7			11246	museul iched l	sequence.	AK011246.1 G1:12	; CAP t	clone_lib:RiKEN_tull clone:2600017M22.	Mus musculus Eukaryota; M	Mammalia;
	Score	1775	1551	1448	1339	407.4 1046.5	1208	1111	1056.5	1043	1030	1029	1016	1004	978	962	9 10 10 10 10 10	947.5	585 505	884.5	2882	 	858	844	824	824	815.5		751	708	700	683 6.81	667	629	6 2 2 2 3 3 4 3	ı						ULE VIEW	0 0 0 1 0 1 0		Маш
	Result No.	1								3 -		. 3	4 .			æ ; ⊷ ;	14 20	21		24	un . Cu i	10	c 28		3.5	Clin min	. 4 . 4	5.7	36 27	\ &	68 0		42	4.	44 4 4 10		RESULT 1 AK011246	LOCUS	DEFINITION	0.000000	VERSION	KEYWORDS		ORGANISM	

dicase visit our and site (iffp yegenemengs: tiken go)pd) for

further details.

. COMMENT

```
4. Kawai, J., Shibadawa, A., Shibada, K., Yoshino, M., Itoh, M., Ishii, Y., Arikwa, T., Hara, A., Fukunishi, Y., Konno, H., Adachi, J., Fukuda, S., Arikwa, T., Tawa, M., Nishi, K., Kiyosawa, H., Kondo, S., Yamanaka, T., Saito, T., Coparaki, Y., Cojohori, T., Peno, H., Kasupawa, T., Saito, P., Kadora, K., Malsuda, H., Ahburner, M., Batalov, S., Casavani, T., Fleischmann, W., Gaasterland, T., Gissi, C., King, B., Kochiwa, H., Kuchil, F., Lawis, S., Matsuo, Y., Nikajdo, T., Pesola, G., Sinita, M., Wagner, L., Washio, T., Sakai, K., Okido, T., Furuno, M., Aono, H., Haidarelli, R., Harsh, G., Blako, J., Boffelli, D., Bojunga, N., Carninci, P., de Bonaldo, M., Brownstein, M., Sulli, D., Hittmann, M., Hume, D.A., Kamiya, M., Gariboidi, M., Gasincich, S., Hill, D., Hitmann, M., Hume, D.A., Kamiya, M., Lee, N. H., Lyons, P., Nordonc, P., Ring, B., Ringwald, M., Walilaya, M., Sakamucko, N., Sasaki, H., Sato, K., Wanai, H., Welizz, T., Sakamucko, N., Sasaki, H., Wynshaw, Boris, A., Yoshida, K., Hanaeqawa, Y., Kawaii, H., Kohisuki, S., Wynshaw, Boris, A., Yoshida, K., Hanaeqawa, Y., Kawaii, H., Kohisuki, S.
                                                                                                                                                                                                                                                  Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Konno,H., Okazaki,Y., Muramaisu.M. and Hayashizaki,Y. Normali, allong subtraction of captrapper selected opnox to prepare full-length chart libraties for rapid discovery of new genes Genome Ros. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Shilota K. Trob M. Alicawal F. Nadarkal S. Sasaki N. Parninci, P. Ending, A. Akiyomal J. Nishik, K. Kitusmal, T. Tashiko, M., Itoh, M., Sumi, M., Ishi, Y., Nakamura, S., Hazama, M., Nishine, T. Harada, A., Yamamoto, R., Matsumoto, R., Baraguchi, S., Ikoyami, T., Kashiwagi, K., Yamamoto, R., Matsumoto, R., Padwa, M., Padwa, M., Adana, F., Wathiwagi, K., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsumoa, S., Kawai, J., Okazaki, Y., Muramalsu, M., Inoue, Y., Kira, A., and Hayashizaki, Y. Striken in preprinted sequence analysis (PISA) system—384-formal Sequence Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Wynshaw-Boris,A., Yoshida,K., Haseqawa,Y., Kawaji,H., Kohisuki,S.
and Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Functional annotation of a full-length mouse cDNA collection
Nature 409 (6821), 685-696 (2001)
                                                                  High-etticiency tuli-length cDNA cloning Meth. Enzymol. 303, 19-44 (1999) 99279253
                                       Carninci, P. and Hayashiraki, Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5 (bases 1 to 1364)
Adarbi, I., Aicawa, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21085560
11217851
                                                                                                                                                                                   10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                         20499374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOURNAL
MEDITINE
AT NUMBER OF
                                   AUTHURS
                                                                                                                                                                           PURMED
                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PERMIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                         JUNITENAL
                                                                                                                                            MELALINE
                                                                                                                                                                                                                      T. N. LY L. L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                              : IKNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   THE NATIONAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PURMED
                                                                                                                                                                                                                                                                                                                                    TITLE
```

```
S feases I to 1864)
S Adachi J. Alchan, K., Akhira, S., Akimira, T., Abno, H., Arai, A.,
Anakawa, I., Baldaroli, R., Bono, H., Brownstrin, M., Bult, C.,
Carrince, P., Fukuda, S., Fukunishi, Y., Furuno, M., Banata, T.,
Garrince, D., Imchan, S., Fukunishi, Y., Furuno, M., Banata, T.,
Hara, A., Hayatsu, N., Hill, D., Hirameto, K., Hiracka, T., Horri, F.,
Hume, D., Imchani, K., Shili, Y., Trohm, T., Tayama, T., Rato, H., Konda, M., Koya, S.,
Kurihara, C., Matchyama, T., Miyacaki, A., Nishi, K., Nimera, K.,
Numazaki, R., Oho, M., Okazaki, Y., Okido, T., Owa, C., Owackenbush, J.,
Salto, H., Salto, R., Sakai, C., Sakai, K., Saro, H., Sato, H.,
Sonabe, Y., Shibata, K., Shibata, Y., Shinagawa, A., Shiraki, T.,
Sonabe, Y., Suzuki, H., Tagami, M., Tagawa, A., Tagamaka, T.,
Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M., and
Hayashizaki, Y.
Physical and chemical Research (RIKEN), Laboratory for Genome
Exphoration Research Group, RIKEN Genome Sciences Center (GSC),
RIFEN Yokohama Iustiune, 17-72 Suehiro eb., Tourumi ku, Yokohama,
Kanagawa 230 Ouds, Japan, (Ermail, Genome reseager riken, go.)p,
URL, http. 'Jerome yer riker, yer je., Tril Hillstrengery
```

JUNERNAL.

3.1

```
Prepare mouse tissues, First strand cDNA was primed with a primer for variances/Ananaschorcharitaritaritary 31, cDNA was primed by using trebulose therms activated reserve to any replace therms activated reserve to any replace therms activated reserve to any replace therms and cuba was prepared with the primer adapter of sequence [5, 64546AnAnAnavarrand cDNA was prepared with the primer adapter of sequence [5, 64546AnAnavarrand cDNA was releaved with Anal and SSTI. Cloning sites, 5, end: Xhol; 3, end: SSTI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DLOEMPETETELOKSIETSVYKFPDLLKEIDISIKVONAMSRÜLKKYNVLCALVSKLE
TYELLYLTQESSALSTEINSMLVKISTSMITELAKGEVLOMBELDVY SPULMCVVD
SPIKESITALLKEIVKTÄRAITINGSIRTI KROÖNKSAA, ARGIENDIRTILIVULKEHE
CHIUEVKNYYEKKETERI INSIGI,PEVESIISKRYERVYIKNKOIDARILFIHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone_lib-"RIKEN full length enriched mouse chNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /translation-"MPPKAPRRAAAEPPPPPPPPPPREDDPAQDSGPEELPLARLEFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EI EEPEFIALOOKI KVPDHVPFPAMI TWEKVSSVDGILEGY TOKKKELWGICI FIAAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KTT.QTDP LOSPETERTERKNIRFOEEANVYTPHTEVRITVMITT GOLMV1 LKSASLJESE
                                                                                 Division of Experimental Animal Research in Riken contributed to
                            Encyclopedia Project of Genome Exploration Pescarch Group in Ri
Genomic Sciences Center and Genome Science Laboratory in PIERN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         295 CCCGAATTIAITGCAITAIGCAAAAGIIAAAGGIACCCGAICAIGTCAGAGAAAAGGGI 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22 ProAspPh@ThrAlaLeuCysSlnLysLeuLysIleProAspHisValArqGluArqAla 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       42 PrpLeuThrTrpCluiysValSerSerValAspClyValLeuClyClytyrHeGlnLys 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      I GluAspSerGlyFroGluAspLeuFroLeuValArdLeuGluFheGluGluIhrGluGlu 21
CDNA Library was prepared and sequenced in Mouse Genome
Encyclopedia Project of Genome Exploration Fessions Grou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note-"data source:MGD, source key:MG1:97874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
Mismatches.
                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="FAN.cm_us.1600017Mld"
/db_xref="MGD:MGI:1905260"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    346 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /dev_stage "10 days embrys"
1, ,1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /codon_start-1
/protein_id "BAB27493.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xrcf-"Cl:12847244"
/db_xrcf-"MGD:MGL:97874"
                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
/strain="C5781,/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HS-09-026-459A-29 (1-895) x AK011246 (1-1364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Caps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  307 g
                                                                                                                                                                                                                                                                                                                           oratics/Qualifiers
...1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rlcne="2600017M22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        retinoblastoma 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NLISYFNNCTVNP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     evidence: 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.98e-180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /qene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .>1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /qene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1775.00
96.01%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30€ C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      89.63%
38.47%
                                                                                                                                                                                                                                                                                                    Host: SOLR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    404 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match.
                                                                                                                                                                                                                                                                                                                                                       apringe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    dene
                                                                                                                                                                                                                                                                                                                              FEATUPES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ĉ
```

```
linear EST 20-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BM551083
AJENEENEEDING S565133 NTH_MGC_67 Homo sapiens cona clone IMACE:5550905
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1135 CTGTTTTGGATCATGATAAAACACTTCAGACTGATGGTATAGAGAGTTTTGAAACAGAG 1194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26.2 AsinPhell+ProPheMetAsinSerLeuGlyLeuValThrSerAsinGlyLeuProGluVal 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          282 CluAmmineuSerLymAraTyrGludlaHleTyrLeuLymAsuLymAmpleuAspAlaArq 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   302 LeuphetzeaspHisAspLgsThrteuGInThrAspSerfleAspSerPheGLuThrGIn 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 342 ValArqThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAsp 361
             222 ArgdlyGluAsnArgSerAlaArgIleAlaLySGlnLeuGluAsnAspThrArgIleIle 241
                                                                                                                                                                                                                                                                                                                                                                                                                  322 ArqThrProArqLysSerAshLeuAspGluGluValAshValIldeProProHisThrPro 341
82 PheThrPheThrSluLenSluLenShrIyeSasnIeSerValHistysPhetheAsnLen 101
                                                                                 5.45 TIAAAAGAAATGGATACCAGTACCAAGGTTGATAATGCTATGTCAAGACTATTGAAGAAG 594
                                                                                                                                       595 TATAATGEGITALGIGGACICITACAGAAAITAGAACGGACGIGGAACTIAATAITIG 654
                                                                                                                                                                                                                             16.2 Trp11eThrPheLeuLeuAlaLysGlyGluValLeuGlnMetGluAspAspLeuVallle 181
                                                                                                                                                                                                                                           775 TOATTICAGOTAATGITGIGIGIAGITGACHATTITATTAAGITGICGIGGACTA 834
                                                    142 Then Inprosorsor sort Loser The Gull of Loser Alaton Vallou ysVal Ser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1415 CAGCATCAGAAAATCTGATTGCTAGTTCAATAATTGGAGAGTGAAT 1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         46.2 chuirroscridtuAsmiculleSerlyrPheAsnAsnCysThrValAsn 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BM561084.1 GI:18806044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BM561083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORCIANTSM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KLYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HM56.10B4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S1, 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                          7
                                                                                                                                                                                          3
                                                                                                                                                                                                                           5 3
                                                                                                                                                                                                                                                                                                          £
                                                                                                                                                                                                                                                                                                                                                                흪
                                                                                                                                                                                                                                                                                                                                                                                                                              £
                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                      ŝ
                                                                                                                                                                    \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                           \tilde{z}
                                                                                                                                                                                                                                                                                                                                                                                                 3
```

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria: Primates: Catarrhini; Hominidae; Homo.

```
Zelone_Lib="NiH_Mor_er
Fissue_Type "retinoblastemea"
Ziab_host="Organ: eye; Vector: pGMV SPORIG; Site 1: Not1;
Zhote="Organ: eye; Vector: pGMV SPORIG; Site 1: Not1;
Site_2: Sall: Cloned anidirectionally. Primer: oligo dl.
Site_2: Sall: Cloned anidirectionally.
                                                                                                                                                                                          DNA Sequencing by Agencourt Blossience Coperation (LLNL) Clone distribution: MGC elone distribution intermation can be found through the L.M.A.G.E. Consortium/LLNL at: http://maqe.llnl.gov.m.eolumn: LB Flate: LLAM12261 - row: m. column: LB High quality sequence stop: 787.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           560 AsnLeuProLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerProValArqSer 579
1 (bases 1 to 1051)
NIH MGC http://www-nri mib qroy/.
National Institutes of Hoalth, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                400 AlaValdlyClnClyCysValClulleClySerClnArgFyrLysLewTyValAraLeu 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              64 FALTACCGAGDAAFGGAAFCCATGCCTAAATCAAGAAGAAGAAGAATAATCAATTCAAAAT 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   440 PheSerLysLeuLeuAsnAspAsnIlePheHisMetSerLeuLeuAlaCysAlateuGlu 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      184 GTTGTAATGGCCACATATAGCAGAGTACATCTCAGAATCTTGATTCTGGAACAGATTTG 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    520 CystluffisArgileMetfluSerLeuAlafrpLeuSerAspSerProLeuPleAspLeu 539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540 TlefysCluSerLysAspArgCluGlyProThrAspHisLeuGluSerALd/ysProLeu 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        420 TyrTyrarqValMctGluScrMctLcuLysScrGluGluGluArqLcuScrHcOlnAsn 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         460 ValValMetAlaThrTyrSerAtqSerThrSerGltdAshLeuAspSerGlyThrAspLeu 479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   480 SerPheProTrp11eLeuAsnValLeuAsnLeuLysALaPheAspPheTy11ysVall1Le 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 GCTGTGGGGCACAGGGTTGTGTCGCAAATTGGATCACAGGGATACAAACTTGGAGTTCGCTTG ++ +
                                                                                                      Email: eqapts r'mail.alh.go.
Tissue Procurement: ATCC
cDNA Library Preparation: Lite Technologies, Inc.
cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         500 GluSerPhelleLysAlaGluGlyAsnLeuThrArqCluMetIleLysHisLeuGluArq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 of heres
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Average insert size 1.75 kb.
Technologies."
1 - 221 c - 197 g - 299 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lengt h:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-026-459A-29 (1-895) x HM561081 (1 1051)
                                                                                     Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                      /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (idps:
                                                                                                                                                                                                                                                                                                                                                                                                                               Zelone-"IMAGE:5550905"
Zelone_lib-"NIH_MGC 67"
                                                                                                                                                                                                                                                                                                                                                                                                    /db_xrel="taxon:9606"
                                                                                                                                                                                                                                                                                                                                         Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2.936-156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1551.00
94.268
91.508
                                                                  Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31.628
                                                                                                                                                                                                                                                                                                                                                                 1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                   Source
                                             111LE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No.:
REFERENCE
                       AUTHORS
                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           e
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 {\rm O}_{\rm Y}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                           ٠.
```

```
linear EST 02-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BQZZDQ75
Arpwownpr_7572621 NH_MWT_92 Homo sapiens cDNA clone IMAGE:6644522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /Lissue_type="embryonal carcinoma, cell line"
//lab_host="DHIOB (phage resistant)"
//nab_host="repair lestis, vertor prive-SppFf, Site_1: NoLI;
Site_2: Salar lestis, vertor prive ligo df primed
Average insert size 2.5 kb. Library enriched for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryolu, Metazou, Chordata, Craniata, Vertebrata, Euleleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                         6.29 LysVallytArquesAlaTyrLeuArgLeuAsnThrieuCysGluArgiculesSerolu 639 High Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hillittill Hi
1 (bases 1 to 881)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                       540 ProLyoLystysGlySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGlnAla 599
                                                                                                                                                                          848 HisProGluLeuGluHisIleIleTrpThrLeuPheGlnHisThrLeuGlnAsnGluTyr 659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 744 GAACTCATGAGACACACANTTTGGACCAAATATGATGTGTTCCATGTATGGCATATGC 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    899 OHISALaValGluGluThrPheLysArdVal-LeuTleLysGluGluGlu-TyrAspSer 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             964 TATATAAGNATTCCTATAACTCGGGCCTTTCATGCAAGGAGACTGAAAAACCAAATA 1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          719 HerleVal - --PhoTyrAsnSerValPheMetCleArgles/ysThtAsulle 735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA Library Arrayed by: The LMLA G P Consertium (LLN!)
DNA Sequencing by: Agencourt Bioscience Corporation
                                                                                                                                     CONA Library Preparation, Life Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    found through the I.M.A.G.E. Consortium/LENL at: http://imagellnlgov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plate: LLAM13287 row: e column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Z6~DDW HIW"-dil_pancis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        स्त्रा १५
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alb_vrof "favon-4606"
/clone="IMACE:6044522"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0.69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: cqapbs-r@mail.nih.gov
Tissuc Procurement, ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B0220275.1 G1:20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PEGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTH IRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JUSTINAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3.7
                                                                                            5
                                                                                                                                                                                                                                                                       ÷
                                                                                                                                                                                                                                                                                                                                                     ã
                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ÷:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
```

```
full-longth clones and constructed by Life Technologies.
Note: this is a NIH_MGC Library."
| 149 c | 155 q | 264 L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 215 GlySerProArgThrProArgAr4GlyGlnAshAr4SerAluArglleAlulysGluben 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    123 GGTTCACCTTCGAACACAGGGGAGGTCAGAACAGGAGTGCAGGGATAGGAAAGAAGTA 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          423 ATAGACAGITITGAAACACAGAGACACACACGAGAGAGATAACGTTGATGAAGGTGAAT 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        355 IleLeuAsnSerAlaSerAspGlnProSerGluAsnLeuIleSerTyrPheAsnAsnCys 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            375 ThrValAsnersiysGluSerIleLediysArgVallysAspp1?eCly?yr1!cPhelys 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   603 ACAGTGAATOCAAAAAAAGTATACTGAAAAAGAGTGAAGGGATATAGGATACATGTTTAAA 652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            437 GouserfledinasnPheSerLysLeuLedasnAspAshfle, PheHisMetSerffeul, 454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A MICHARD MINISTER MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARKAN MARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             197 (ysleuSciProProMetLeuteulysCluProTyrtysThrAlaValileProficAss)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      315 !!cAspScrPheGluThrGLnArgThrProArgLysScrAsnizeuAspGluGluValAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               335 ValileProProHisThrProValArgThrValMetAsnThrIleGinGinLcuMetMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            483 GHAATHCCHCCACACACTCCAGTHAGGACTCTTATCAACACTATCCAACAALHAATGATU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               175 MetGluAspAspLeuVallleSerPheGluLeuMetLeuCysValLeuAspIyrPhelle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               255 ValigsAsnValrgribetgsAsnTheilerrometAsnSerbeugigbeuVaithn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        295 AsoLyoAspLeuAspAlaArqLeuBheLeuAspHisAspLysThrLeuGlnThrAspSer
                                                                                                                                                                                                                                                                                                                                                           Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 454 cuAlaCysAlai.cuGluValValWetAlaThrTyrScr 466
                                                                                                                                                                                                                                                                                                                           Matches.
                                                                                                                                                                                                                                                                             Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-026-459A-29 (1-895) x BO220275 (1-881)
                                                                                                                                                                                                                                                                                                             1448,00
98,308
97.968
31.388
                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
Query Match:
                                                                                      313 a
                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                           A.ignment Scores:
                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                             red. No.:
                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ं
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ö
```

```
linear EST 05-FEB-2002
                                                                                                        HM475603
ADENIY GRI, 6480607 NTH_MGC_92 HOMO SAPIENS CLANA CLONE IMAGE:5575683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         //issue_type="embryonal carcinoma, cell line"
//issue_type="embryonal carcinoma, cell line"
//lab_host="liHi0# (phage resistant)"
//lab_host="liHi0# (phage resistant)"
//look="linguit lestis: Vector: pCMV SPORT6; Site_1: Not1;
Site_2: Sall; Cloned unidirectionally; oliqo dI primed.
Average insert size 2.5 kb. Library enriched for
tull length clones and constructed by Lite icchnologies.
Note: this is a NHH_MGC Library."
                                                                                                                                                                                                                                                                                                                      Eukaryoja, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia: Eutheria: Primates, Catarthini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cDNA Library Preparation: Life Technologies, Inc.
-inA Library Arrayed by: The L.M.A.G.B. Consortium (LLNL)
binA Sequencing by: Agencourt Broscience Corporation
clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                  MINIMESTATE //nes for a shape \chi_{\rm c} . While Manualian Gene Collection (MGC) National Institutes of Health, Mammalian Gene Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  102 LeuLysGluffeAspThrSerThrLysValAspAshAlaMetSerAigLeuLysLys 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        122 TyrAspValLeuPheAlaLeuPheSerLysLeu-GluArqThrCysGluLeuTleTyrLe 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98 TATGATGTATTGTTTGCACTCTTCAGGAAATTCGGAAAGGACAAGGGACAACTTATATATTT 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                141 uThrühnProSerSerSerSerfleSerThrühnHeAsnSerAlaLeuValLeuLysValSe 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15B GAMAMAANMAGIRGGATARGIAGIGAAATAAATHGTGGATHGGTGGTAAAAGTTTG 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161 rirpilethrPheLeuLeuLeuAlaLysGlyGluValLeuGlnMetGluAspAspLeuValll 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              218 TIBGALGACAITITIAFIAGGIAAAGGGGAAGTATIACAAATGGAAGAIGATGTGGTGAT 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 eSerrheSinLeuMetLeuCYSVaiLeuAsplyrPhelleLySLeuSerProProMetLe 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *** CTCCGAGTAATTGATACCAGTACCAAAGTTGATAATGCTATGFCAAGACTGTTGAAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tound through the L.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1001
281
10
10
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
Mismatches:
843 TOGGGGGGGGTGTTGAGTTGTAATGGGGAGATATAGG 880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Plate: LLAM12326 row: 1 column: 04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Robert Sfrausberg, Ph.D.
Email: eqapbs remail.nib.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US U9 026 459A 29 (1 895) x BM475603 (1 1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /orqanism."Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          High quality sequence start: 17
High quality sequence stop: 734.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xret-"taxon:9606"
/elone-"IMAGE:5575683"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                             BM475603.1 GI:18524645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2.026 133
                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 1001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1339.00
93.878
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    90 65%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              870.67
                                                                                                                                                              5', mKNA sequence.
BM475503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 1001
                                                                                                                                                                                                                                                                                                  Hollio Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loral Similarity:
                                                                                                     BM4 7560 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
58:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOHLOS
                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                  TREAD SM
                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred No. :
                                                                                                                                                                                    APPESSION
                                                                                                                                                                                                                VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                         RM475603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NIMM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PICIN
                                                                                                                                                                                                                                                                SOUR'E
                                                                                                        SHOOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
```

```
EST 14 AUG Zoel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST (Poustka,A., Wellenreuther,k., Mewes,H.W., Weil, H. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Poustka, A., Wellenreuther, K., Mewes, H.W., Well, H. and Wiemann, S.).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
Eukaryota; Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           201 SANDERGIA PROGRAMOLA BOROLA BOROLA BOLLA BOLLA BOROLA BOROLA BALLOLA BOLLA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                338 GCTCAAAGAACCATATAAAACAGCTGTTATACCTATTAATGGTTTACCTCGAACACCGG 397
                                                                                                                                                                                                                                                                                                                      241 eGluValleuCystyseluHis6luCysAsnifeAspeluVallysAsnVallyrehety 261
                                                                                                                                                                                                                                                                                                                                                                                                 458 TGAAGTTCTCTGTAAAGAACAIGAAIGTAATATAGAIGAGGTGAAAAAIGTTATTICAA 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               878 AAAGCIATACCGGAAAAGAAGGIAAGGAAIAIAGGAAIAACIICIIIIAAAGAAAAAA 937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DKFZp31000816_rl 313 (oynosym: hlec2) Homo sapiens cDNA clone
DKFZp31300816 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                321 nArqThrProArqLysserAsnLeuAspG1uG1uVa1AsnValI1eProProHisThrPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                341 oValArqThrValMetAsnThrIleGInGInLeuMetIlleLeuAsnSerAlaSerAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   201 uLeuLysflaproTyrTysThrAlaVallTePrefleAcuflySeaft ArithfroAc
                                                                                                                                                             221 gArqG1yC1nAsnArqSerAlaArg11eAlatysOlnLenGluAsnAsp1hrArq11e11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301 gleouPhet.cuAspHisAspLysThrLeuGlnthrAspSerTleAspSerTheClnthrGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VallysAspileOlyTyrile The Lycologs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 727)
                                                                                                                                                                                                                                                                                                                                                                Directar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This is the 5' sequence of the clone insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Department Lehrach
Max-Planck-Institute for Molecular Coneties
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: poustka≅mpimq-berlin dahlem.mpq.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    III K NA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The Strasse 73, 14195 Herlin, Germany Tel: 449-30-84141623
Fax: 449-30-84141128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       727 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ALS97811.1 C1:15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            397 -- PheAlaLysAlaValGly 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  938 TICIGGCIAAAAGCCTGGGG 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Poustka A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ,S.)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               380 uSerIleLeuLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A1.547811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
    ŝ
                                                                              9
                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                 <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₽
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ξ
```

```
Posserth Teater (TFFT) (1938) Septembrild From Garden B. Sequenced by DNFT. (Gorman Cancer Research Center, Heldelberg Garmany) within the CDNA sequencing concertium of the German Genome Project Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No si sequence avaliable.
This clone (DKKZp31300816) is available at the KZPD in Berlin. Please contact the KZPD. Kessourcenzentium, Heubnerweg 6, 14059 Berlin-Charlottenburg, GERMANY; Email: clone@rzpd.de.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     770 AssibeTyrileSerProteutysSerProTyriysIleSerGluGlyLeuProThrPro 789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #13-710 (1777)-03 (11777)-03 (1777) | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE | PROFITE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sto tysserthyscricuscricarharyrtystysvaltyragieuntatyricunandeu 629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        630 Asnibit.cuCysGiuArqiqo!quSerGiuHisProGluf.euGluHisilet.leTrpTbr 649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      550 LeuPheGluHisThrLeuGlnAsnGluTyrGluLeuMetArgAspArqHisLeuAspGln 669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122 CITTIRGAGCACACCCEGCAGAAFGAGTATGAAGTCATGAGAGACAGGGAGAGAGAGAGGAA 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gun ThorhovalThralafyriysAspionDrowisAlaValClrCluThrDholysArgVal 709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         110 TeufletysatludludludlufyrAspSerflelleValPheTyrAsnSerValPheMe+Gln 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23. Arguenty sthr Ashi Februari inty: AlaSei Thi Angeropto Thi Leuser Pro He 749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         790 [thr:ysmorthrproArgScrArgTisLesyvalScrTied;yoluScrDbed;ydbrScr_809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 AAAICIACICITICACIGIIITAIAAAAAAGTGTATCGGCTAACATATCGGCTATCTCATA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       727
241
0
1
1
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib_%13 (synonym: hlcc2)"
/dev_stage="adult"
/lab_best="tallog"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US US 026-459A 29 (1-895) x AL597811 (1-727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  __9180cx_12d2480_--vuv(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taven:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.84e-124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1254.00
99.598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 865.66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27.18%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -al Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          238 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Forces: Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HASE CON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FIELD NO.
                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
```

ŝ

ŝ

<u>...</u>

Ē Ś ä 5 = ŝ

```
HQ222227
AGENCOURT_7566045 NIH_MGC_92 Homo sapiens chwA clone IMAGE:6041563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissuc_type "chiribal catchona, cell line"
/lab_host="DB10B (phage-resistant)"
/note-"organ: testis; vector: pCMV-SPORTE; Site_1: Not1;
Site_2: Sall, dioned unidirectionally, oiluo dI primed.
Average insert size 2.5 kb. Library enriched for full-longth clones and constructed by Life lechnologies.
Note: this is a NH_MCC library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota: Motazoa: Chordata; Cran_ata; Vertebrata; Euteleostomi: Mammalia: Eutheria; Primates; Catarrhini; Hominidae; Homo. I hases 1 to 800.
NiH-MON bitp://wego to: wib govy.
National institutes of Health, Mammalian Gene Coffection (MON) Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LINE) DNA Sequencing by. Agencout Bioscience Corporation (CONTENT OF A GENERAL BIOSCIENCE CORPORATION FOR CLONE distribution intermation can be found through the L.M.A.G.E. Consortium/LLNL at: http://mage.llnl.gov
                                                                        124 ValLeuFheAlaLeuFheSerLysLeuGluArqThrCysGluLeuIleTyrLeuThr3lu 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             164 Oktober General alge 2019 Stevat keep travet Stevas gespecies (1934) | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plate: LLAM13279 row: 1 column: 20 High quality sequence stop: 606.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact. Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone_lib="NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-03-056-056-469A 29 (1 896) * MOLLICOT (1-880)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /close-"IMACE: 6041563"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5', mRNA Sequence.
BQ222227
BQ222227.i 31.28403827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.89c 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1236.50
92.88%
90.75%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26.80%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    321 a
                                                                                                                                                                                                                                                             850 AspGlu 851
                                                                                                                                                                                                                                                                                                                                          722 GATGAA 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ..
ON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Att. B. 45 S. T. T. T. E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             воззаза7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred.
                                                                                                                                                                  ź
                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ξ.
```

```
EST 05-FER-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BMA54724 Incar EST 05-FEB-2003
AGENCOURI_6402744 NIH_MGC_72 Homo Sapiens cona clone IMAGE:5528814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bukaryoja, Metazoa, Chordata: Craniata, Verfebrata, Buteleostomi,
Mammalia: Butheria: Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 835)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         421 ATACCTTTATGAATTCTGTTGGACTTGTAACATCTAATGGACTTCCAGAGGTTGAAAAT 480 .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencial by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
                                      284 LeusertysArgTyrslaGlufleTyrLeuLysAsnLysAspLeuAspAlaArgLeuPhe 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                104 JeuAspHisAsplysThrLeudluThrAspSerIleAspSerPhedluThrslnArgThr 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        324 ProArgLysSerAsnLeuAspGDuValAsnVallTeProProHisThrProValArg 343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  344 ThrValMetAsnThrIleGInGInLeuMetMetIleLeuAsnSerAlaSerAspGIn-Pr 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 ACATTITLATIAGCTAAAGGGGAAGFATIACAAHGGAAGAGAFGAFGGFGGFFFCAFFFF 180
                                                                                                                                                                                241 GAACCAFATAAAACAGTGTTATAGCCATFAATGGTTCACCTCGAACACCAGGCGAGGCT 300
                                                                                                                                                                                                                                                                                                                                                                451 CTCTGTAAAGAACATGAATGTAATATAGATGAAGAAAAATGTTATTTGAAAAATTTT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481 (1111) HARAARIGA LANGAAGAAARTHA HOLH AAAAARAAAGA FOLAGA FOLAGA FILATITE 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            464 OSerGluAsnLeuIle-SerTyrPheAsnAsnCysThrValAsn---ProLysGluSerI 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721 TECAAAAAFGTGATTTFGTATTTAAGGAGGAGGGAAFGGGAAAAAAT 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NIH_MOC bttp://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                182 leteu-----LysArqValLysAspileGlyTyrilePhe-----LysGluLysPhe 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              781 ATACITIGGAAAAAAAGGGAAAAGGAAINIAAGGATAACAITICCITAAAAAAAAAAAIIT 839
                                                                                                                                  204 clubrolyrtysthrAlaVallleProlleAsnGlySerProArgthrProArgArgGly
                                                                                                                                                                                                                         224 StadenArqSerAlaArqtteAtatysChatenGluAsnAspThrArqtTexteGluVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LLAMIZZO6 row: e column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: eqapbs remail.nih.gov
Tissue Procurement: ATCC/DCTD/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BM453724.1 GI:18502754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5°, mkNA sequence.
BM45.3724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Romo Saphens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOTAL STORY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NOTHINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHUANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JUST RANDEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HM45.47.24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . MME.N.F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S(1, %)
                                                                                                                                                                           Ē
                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                    2
                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                             \hat{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
```

High quality sequence stop: 647

```
Zelone_lib="NiH_MGG_72"
Zissuc_typo-"med-anotic metanoma"
/Ibb_host "Bublob (phage rosistant)"
/note="organ: skin; Vector: pcWW SPoRT6; Site_1: Not1.
Site_2: Sall; Cloned unidirectionally. Primer: oliqo dt.
Azerae insert size 2 kb. Library constructed by Lite
rechnologies:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   737 GlnTyrAlaSerThrArqProPro---ThrLeuSerProlleProHisHe ProArqSe 755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                617 PheTyrLysLysValTyrArgLeuAlaTyrLeuArgLeuAsnThrLeuCysGluArgLeu 636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         657 AsnoluTrGluLcuMetArqAspArqHisLeuAspGlulleMetMetGysGenMetTgr 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   548 GAICTICCTCAIGCIGTICAGGAGACAITCAAACGIGIIIIGAICAAAGAAGAGGTAT 607
                                                                                                                                                                                                                                                                                                                                                                                                                             517 LeuGluarqCysGluHisArqIleMetGluSerLeuAlaTrpLeuSerAspSerProLeu 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    68 TITGATCLIAITAAACAA FCAAAGGACCGAGAAGGACGAAMIGA FOOTTGAA FOTGM 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  557 CysProLeuAsnLeuProLeaGlnAsnAsnHisThrAlaAlaAcpMedTyrLeaSerPro 576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   128 TGFCCTCFFFAAFGFFCCFFCCAGAATAATCACACTGCAGAGATATGTATGTTFFFCFF 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     577 ValArgSerProtystystysOlySerThrThrArqValAsnSerThrAlaAsnAlaGlu 596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      597 ThrGInAlaThrSerAlaPheGluThrGluLysProLeuLysSerThrSerLeuserLeu 616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    248 ACACAAGCAACCECCAGCETICCAGAACCCATIGAAATCEAAACETAACETETETACEG 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         637 LeuSerGluHisProGluLeuGluHisllellelrpThrLeuPheGluHisThrLeuGln 656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              677 GlyfleCysLysValLysAsnfleAspLeuLysPhcLysflefleValThrAlaTyrLys 696
                                                                                                                                                                                                                                                                                                                                                                                                                                               1 of hers
                                                                                                                                                                                                                                                                                                        Ponservative:
Mismatches:
                                                                                                                                                                                                     147 q 244 t
                                                                                                                                                                                                                                                                                      Matches:
                                                                                                                                                                                                                                                                                                                                          Indels:
                            /ordanism "Homo sapiens"
/db aret-"taxon:9606"
// Lone "IMAGE:5528814"
                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                           US-09-026-459A-29 (1-895) x HM453724 (1-835)
Location/Qualifiers
                                                                                                                                                                                                                                                                                      1208.00
92.91%
91.04%
                                                                                                                                                                                                       210 6
                                                                                                                                                                                                                                                                                                                                         26.188
                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                         æ
                                                                                                                                                                                                                                                      Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                          Query Match:
                Source
                                                                                                                                                                                                                                                                        ..
Š
                                                                                                                                                                                                    BASE COUNT
FEATURES
                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
C
                                                                                                                                                                                                                                                                                                                                                                                                                               ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>q</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ^{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ^{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
```

```
AA7634:1 Avstandmary-gland_NNLMG Mus musculus con clone workeadet. Soares_mammary-gland_NNLMG Mus musculus con clone lMAGE:1247598 5' similar to gb:M5400 RETINOHLASTOMA ASSOCIATED PROTEIN (HUMAN); gb:M26391 Mouse retinoblastoma susceptibility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 914)
Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
Geisel,S., Kucaba,T., Lacy,M., Lo.M., Martin,J., Morris,M.,
Schellenberg,K., Stepteoe,M., Tan,P., Underwood,K., Moore,B.,
Theising,K., Wylie,T., Lennon,G., Soares,H., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fukaryota, Motavoa, Cherdata, Craniata, Vertebrata, Enteleostomi,
Mammalia: Entheria, Rodentia, Schurognathi, Muridae, Murinae: Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This clone is available royalty free through LAML; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                            760 ProSerSerProLeuArgileProSiysiyAsmileTyrileSerProLeuLysSerPro 779
                                                                                                                                                                                                                                                                                  809 ValSerffeClyStuSevPheSlyThaSetClatystheStatystLeAshClnMetVal 819 HTHHHHHHHHHHHHHHHHHHHH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    940 TystystenarqphoaspilentystaspiloataaspilysertysHistonPto 899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      860 G1yGluSerlysPheGluGlnGlniysLeualaGluMet.hr SerThrarg1hr ArgMetG1, 879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              820 CysAsnSerAspArqValLeuLysArqSerAlaGlaGlySerAsnProProLypProLeu 839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              242 CCLAGELCACCCITACGGALICCTGGGGGAACAICIALALITICACCCTGAAGAGICCA
                                                                                                                                                                               780 TyrtysileSerGlaGlyt.euProThrProThrtysMetThrProArgSerAiqtleLe.
                                                                                                                                                                                                                               302 TATAAAATTTCAGAAGGTCTGCCAACAACAAAAATGACTCCAAGATGAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4444 Förest Park Parkway, Box 8501, St. Louis, MC 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_krei-"taxon:10090"
/clone-lib/dbsit247598"
/clone-lib/scares_mammary_qland_HMLMG"
/sex="female (lactating)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WashU-HHMI Mouse EST Project
Washington University School of MedicineP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seq primer: -28ml3 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissue_type-"mammary gland"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1996)
Contact: Marra M/Mouse ES: Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: mouseest@watson.wustl.edu
This clone is available royalty f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein (MOUSE);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The WashU-HHMI Mouse EST Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  High quality sequence stop: 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA763411.1 GI:2813158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MG1:661286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA763411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA763411/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REPERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                    FM45001 Libear EST 05-FEB-2002 APEND UPFER-2002 PPER-2002 APEND UPFER-2004 FMCF27 HOME SAPIERS CHWA 0000 FMACP:5528037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissuc_type="mclanotic melanoma"
//lab_host="DHIOB (phage-resistant)"
//nater="Oragas skin, Vorter powy-gnorme, site_1 Not1;
//nater=skin, Cloned unidirerriemally Primer Cliqe dT.
//nater issert size 2 kb, Library constructed by Life
Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                    Hemo supjens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tissue Procurement ATCC/DCTD/DTP CDNA Library Preparation LIFE Technologies, Inc. con Library Preparation LIFE Technologies, Inc. con Library Arrayed by: The LIM A.G.B. Consortium (LLNL) BNA Sequencing by Appendix Prissologies Consecution information can be Clone distribution; MGC clone distribution information can be http://insq-lihlaw.acc.comedistrium/link.atc.html:204 row: d column: 22 High quality sequence stop: 643.
25 rProfyrLys---PheProSerSerProLeu---ArgilePro---GlyGlyAsn---- 770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 1023)
NIH MGC http://mgc nci nih gov/
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               729 IBOVALEHATYRASDSGEVALFRAMETGLAARALGAGTARASAIJALGAGGLATYRANA 739
                                               728 COCCTFACAAGIIIICCCIAGIIIFCACCCIIIACGGAAIICECIGGGAAGGGAACCAICC 787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               680 LysVallysAsnilcAspleulysPhelys!!e:]eValThrAlaTyrlysAspleuPro 699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               700 HisAlaValGlnGluThrPhaLysAruValLeulleLysGluGluGluTyrAspSerIle 719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          122 ATANTATTOTATAACHOOMPOTTOAFGOANACHAAAAAAAAAAAAATATTOOAGFAHOOT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 740 SeribrargProProThrLeuSerProlleProHisileProargSerPreTyrtysPb. 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 AAAGIGAAGAAIAIAGACCITAAAITCAAAATCAITGIAACACAIACAAGGAICTICCI 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mammalia; Eutheria; Primates; Catarrhini; Hominidao: Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1023
216
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                281 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .1023

/organism="Homo sapiens"

/db_xr=== axin: 9606"

/clone="IMAGE:5528037"

/clone=lib="NIH_MGC_72"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          indcls:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-ramail.nib.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US 04 026-459A 29 (1-895) x BM450031 (1-1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           197 g
                                                                                                  771 -IleTyrIleSerProLeuLys 777
                                                                                                                             5', mkNA sequence.
BM450031
BM450031.1 GI:18499071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8.23e-109
1111.00
100.00*
100.00%
                          21.1 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24.08%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bost Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             134 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Potosia Similarity
                                                                                                                                                                                                                                                                                                                                                                                                               human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oneny Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SCHICE
                                                                                                                                                                                                                                                                       Notice N Little
                                                                                                                                                                                                                                                                                                                            A-1-TESSTUN
VERSTUN
                                                                                                                                                                                                                                                                                                                                                                                                                                    ROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HASE 'UNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTH RS
                                                                                                                                                                                                                                                                                                                                                                                 KEYW (PEK
                                                                                                                                                                                                    RESULT B
                                                                                                                                                                                                                               BM450041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SKIGIN
                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ē
```

```
Another Vector: pT7L4D-Pac (Pharmacia) with a medilied polylinker; lst strand cubw was prepared from mammary dand tissue from a lactating formists, and was then primed with a Not 1 - oligodal) primer. Doubler-stranded const liqated to Fee RI adaptors (Pharmacia), dispessed with Net 1 and cloned into the Not 1 and Eco RI sites of the modified pT7T3 vector. Library is normalized. Library was constructed by Wento Soares and M. Patima Honaldo. "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HITTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELlettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    423 ValMetGluSerMetLeuf/gsSerGluGluGluGrqfeuSerlleGlnAsnPheSerlys 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   442 001A03A1A00A6AAG1A0A11G0AG0A1G11GAT1C1GGAACAGA111G1CG11GCG3333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          524 ArgilioMetGluserLeuAlaTrpLeuserAspserProLeuPheAspLeuIleLysGln 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          54.4. SertlysAspArgCluGlyProthrAspHisLeuGluSerAlaCysProLeuAsnLeuPro 562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40 F. PheteruAspHisAspLysThrLeuGlüfhTAspSerTTeAspSerPheGlüfhrGlüArg 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  914 TITTTGGATGGAGATAAAGGGGGGGGT--TGGTTTAGGGGTTTTTTAAAGGGGGGG 857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          323 Thr ProArqLyssor Asni ouAspithidiuVal AsnVal HoproproAfstbrppgVal 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               34.3 ArgThrValMetAsuThrIleGluGluLeuMetMetIleLeuAsuSerAlaSerAspGln 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   797 FOGGIGTETTGGAAPHALGCAACAATTFATTGTGATFTTAARGTGGGGGTGAATGGGGG 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46.1 ProSerGluAsnLeulleSerTyrPheAsnAsnCysThrValAsnProLysGluSerfle 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               747 COTCAGAATITOTGTT-TOCOTCFCTAATATTGGGGGGGGGTAAGGGGAAAAATTGGG 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          183 LentysArqValtySAspileGlyfyrilePhetysGlutySPheAlatySAlaValGly 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            678 PTAAAAQODDII AARDARDIIGOOGAAAAAAAAAAATIIGIA---AQOOTGIGG 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          404 GlastycysvalcinilosiysorsinArgTyrLysLeusiyValArqLeuTyrTyrArq 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    443 LeuleuAsnAspasnilePheHisMetSerfæulæuAlaéysAlafæuGluValValMet 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             463 AlaThrTyrSerArgSerThrSerGluAsnLeuAspSerGlyThrAspLeuSerPhePro 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                50) HetysaladludiyasnizuthrangdiuMetiletyshisLeudluarqCysdluHis 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US 09 026 459A 29 (1 895) x AA763411 (1-914)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
/lab host ."DH10R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.25e 103
1056.50
82.14%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        %06.77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               75.478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        guery Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ¥ 1,7 E
```

3 3 5 ã $\frac{1}{2}$ جَ 3 Ē -4 $\frac{25}{5}$ تِ

Ė

Ę 5 <u>2</u> 5 ã 5

```
Anote Totagan Edgin, Vertor: priMVSPoRT 6; ist strand cDNA was primed with a NotLolino(41) primer. Fire prime end continued, double stranded cDNA was diseased with Not I and continued into the NotLolino and Rose W Siros of the primer by vector. Library was normalized. Library was constructed by Life Technologies, Contact: Fend Liand Library Primer Edgins of Drive Rockville, Maryland 20050, USA Fax: (1) sol 610 Bttp://tulleggin.org/library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com//library.com/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ALSO 2727 TELLINELOOT_NHC4 Homo saptoris CDNA clone (Spidou)7VAOS (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
Eukaryota: Metazoa; Chordata; Craniata; Vertebiata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        227 Seralaargilealatyschdeuchuasnaspihratqilethedavalla mystys 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            231 AGTGCACGGWTAGCAACACAAYTAGAAATTGALACAAAATTATTGAAGTTATTGAAGTTCLCTGLAAA 672
                                                                                                                     563 LeuGlaAsnAsnHioThrAlaAlaAspMe(TyrLeuSerProValArdGerProJysLys 582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        207 LysThrAlaValileProlleAsnGlySerProArqThrProArqAlqGly:UnAcnArq 226
                                  85 AGAACTECTACTACACTGTAAATTCTGTGTGCAAATACAGAGACACAAGAGCTCAGCC 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: seqref genoscope.cns.fr. Web : www.qenoscope.cns.fr.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 792)
LiAW.B., Gruber.C., Jessec,J. and Polayes,D.
Pull-length chwa libraries and normalization
Unpunished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type "neuroblastoma_cells"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genoscope - Centre National de Sequencaqe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /elone_lib="LTI_NFL001_NBC4"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism-"Homo sapiens"
/db_xrel-"taxon:9606"
/clone-"GSODD007YA05"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BP 191 91006 EVRY cedex - France
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-026-459A-29 (1-895) x AL563757 (1-792)
                                                                                                                                                                                                                                                                                603 PheGinibidiniysProLeutys 610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25 TTCCATACTCAGAAGCCATTGAAA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AL563757.1 GI:12913464
                                                                                                                                                                                                                                                                                                                      prime, mRNA sequence.
AL563757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.216-101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1043.00
84.53%
81.89%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /lab_host
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ..
NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                          AL563757/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aliqnment
                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ROBECE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred.
                                                                =
                                                                                                                                        Ĝ
                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                        G
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
```

```
Am Klopterspitz 18a D-82152 Martinsried, Germany
This is the 5' sequence of the clone insert
Clore from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Conter (DRY7): Final S. Wiemann Addrz heidelberg de:
sequenced by BMFX. (Biomedical Research Center at the Charite,
Berlin/Germany) within the cDNA sequencing consortium of the German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST 14-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
Eukaryota: Metazoa: Chordata: Craniata; Vertebrata; Buteleostomi;
Mammalia: Bulbaria: Primales: Calarrhini: Hominidae: Homo
407 01911011yserSlnArglyrLysLouSly--ValArgLouTyrTyrArgValMetGluS 426
                                                                                                                                                                                               24.7 MetAsmSert.cuGlyt.cuValThrSerAsmGlyt.cuProGluValGluAsmLcuSert.ys 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               427 SerAsmleuAspGluGluValAsmVallleProProHisThrProValArgThrValMet 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               411 PTGTTTTYTWITTTTACGACTGCACAGTGAATGCAAAAGAAAGTATACTGAAAAGAGTG 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          251 AAGGATWTKGGATACWTYTTTAAAGAAATTTGCTAAAAGCTGTGGGAACAGGTTGTGT 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                191 GAAATTGGATCACAGGGATACAAACTTGGTTTTCGCTTGTATTACCGAGTAATGGAAT 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               426 erMetLeuLysSerGluGluGluArgLeuSerIleGlnAsnPheSerLysLeuLeuAsn- 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          446 AspasmilePheHisMetSerLeuLeuLeuAaCysAlaLeuGluValValMetAlaThrTyr 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST (Kochtor,K., Beyor,A., Mewes,H.W., Weil,H. and Wiemann,S.)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                          297 ArgTyrSluSlulleTyrLeutgsAsntgsAspteuAspAlaArgLeuPheleuAspHis 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ASPLYSTARLeuGloThrAspSerIleAspSerPheGloThrGloArqThrProArqLys 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ALTYMORE STORMS TO A SET TO BE BENTAL LINEAT EST 14-ALDER PROPERTY STORMS TO A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECTION OF A SECT
                                                                                                                                                                                                                                                  447 AsmiltrifeGinGinLeuMetMetileLeuAsnSerAlaSerAspGluProSetGluAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.7 LeulleSerTyrPheAsnAsnCysThrValAsnProLysGluSerIleLeuLysArqVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.3.L. AGIAAGCIIGWIGGAGAGAGATGIAAITPPITPPAAAAAPPPPAGGATAGGAYIGIIIIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Koehrer, K., Beyer, A., Mewes, W., Weil, B. and Wiemann, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AL599633
AL599633.1 GI:15162921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 605)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Kochrer K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     466 SerArgSer 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11 GCAGLAAG1 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MIPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N. T. N. HER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTESSION
VERSION
REYMORIS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
ALS99633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTH /RS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JUNEAN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          O MMH:N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                201.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
```

```
Zhote-"Vector, pTilplEx2, Site_1, SiliA; Site_2; SlilB; cDNA.collection"
No 51 sequence available.
This clone (DKFZp313F092) is available at the RZPD in Berlin.
Please contact the EMPN: Messeurcencentrum, Heubnerweg 5, 14,59
Berlin-Charlottenburg, GERMANY, Email: clone#rzpd.de.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  242 @10Va1FevCystysCudisGluCysAsn!!cAsp@tuValLysAsnValTyrthettys 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          282 GluAspLeuSerLysArgTyrGluGluIleTyrLeuLysAsnLysAspLeuAspAlaArg 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GAAAATCTTTCTAAACGATACGAAGAAATTTATCTTAAAAATAAAAGATCTAGATGCAAGA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              322 ArgThrFroArgLysSerAsnLewAspGluGluValAsnVallleProProBisThrPro 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     382 IbeLeutysArgValLysAsplleGlyTyrilePhcLysGluLysPheAlaLysAlaVal 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421 ATACTGAAAAGAGTGAAGGATATAGGATACATCTTIAAAGAGAAAFIFGGTAAAGCFGFG 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 402 GlySlnSlyCysValslv1SeSlySerSlaArsIyxLysLeuGlyValArsIxryrTyr 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481 GGACAGGGITGIGICGAAAITGGAIGACAGGGAIACAAACIIGGAGFICGCIIGIALIAC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           422 ArgValMetGluSerMetLesiysSerGluGluSluSluArgLeuSerILeGluAsnPheSer 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541 CGAGTAATGGAATCCATGCTTAAA1CAGAAGAAGAACGATTATCCATTCAAAATTTTAGC 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GAAGTICITGIAAAGAACAIGAAIGIAAIATAGAIGAGGIGAAAAAIGIIIAIIICAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                262 AsnPhoIleFroFheMetAsnSerLeuGlyLeuValThrSerAsnGlyLeuProGluVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     342 ValArgThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301 GITAGGACTGITAIGAACACTAICCAACAATIAAIGAIGAITTIAAATICAGCAAGIGAI
                                                                                                                                /db_xred.-"taxon:9606...
/clone-lib="313 (synonym: hlcc2)"
/dcy_staye-"adult"
/lab_host.-"DH108"
                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
                                                                                                                                                                                                                                                                        179 t
                                                                                                                                                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                    /ordanism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-026-459A-29 (1-895) x AL599633 (1-605)
                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                        106 q
                                                                                                                                                                                                                                                                                                                                                3.57e-101
                                                                                                                                                                                                                                                                                                                                                                                    100.00%
                                                                                                                                                                                                                                                                                                                                                                    1037.00
                                                                                                                                                                                                                                                                        92
G
                                                                                                                                                                                                                                                                                                                                                                                                                        22.488
                                                                                              .605
                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                        228 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       442 Lys 442
                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601 AAA 603
                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                  ..
ON
                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 12
                                                                              FEATURES
                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                    Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         e
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ĝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;.
Č
```

BE082846/c

Genome Project

```
Zooto- "origor breast: Weetor: pucl8; Site_1: Smal; Site_2: Smal; A mini-library was made by closing products derived trom ORESTES PCE (H.S. Letters Patent application No. 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This sequence was derived from the PAPESPZLICE Roman Cancer Genome Chipself his entry can be seen in the Tollowing UKL (http://www.lulwig.sg.br/scripts/gethini2 plati-wig-eth-Rom42 210-200-014 en6wit+2000-02-21wi4+1)
  EST 12-JUN-2000
                                                                                                                                                                                                                                                                                            Nadal, M.A., da Silza, W. Jr., Zago, M.A., Bordin, S., Costa, F.F.,
Goldman, G.H., Carvalbo, A.F., Matsakuma, A., Baia, G.S., Simpson, E.H.,
Brunstein, A., deoliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare
, M.J., Soares, F., Brentani, R.K., Reis, L.F., de Souza, S.J. and
                                                                                                                                                                                                                                                                       Dias Neto,E., Gareia Correa,K., Verjovski-Almeida,S., Briones,M.K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ,716 · Ludwid Institute for Cancer Research) profiles into the pUF 18 vector. Reverse transcription of tissue mRNA and cLNA amplification were performed under low
           PCZ BT0642 Z10200 014 e06 BT0642 Homo sapiens cDNA, mKNA Sequence.
BE082846
                                                                                                                                                                                       Eukaryola; Metazoa: Chordata; Craniata; Verfebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 694)
                                                                                                                                                                                                                                                                                                                                                                                                                                     Shotqun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                For Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          557 TACAAACTTGGAATTCGCH LGTATTACCGAGTAATGGAATCCATGGTTAAATCAGAAGAA 498 🕆
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99 ChetyadlatyaPhatysAlaValGlyGlnGlyCysValGluIleGlySerGlnArg 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         413 1971.pst.cuclyValArdtentyrTyrArdValMetGluSerMetLentysSerGluGlu 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               474 AcmOpsThrValAcmProLysThaSerIleta atysArgValLysAspIleGlyTyrIle 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   676 PACTICIOANGEGAT CICAAAAGAAAGTATAGEGAGAAGAAGAATATAGGATAGATIC 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                617 TITAAAGAGAATITGCIAGGCIGIGGGACAGONTIGIGGAAAIIGGAAAIIGGAICGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Proc. Natl. Acad. Sci. 5.5.A. 97 (7), 3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 others
linear
  mkny
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Laboratory of Cancer Jeneties
Ludwig Institute for Cancer Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US 09-026 459A 29 (1 895) x BE082846 (1-694)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality Sequence stop: 669.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6.94 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Seq primer; pur 18 forward
High quality sequence start; 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db/xrefr"taxon:9606"
/clone_lib="B10642"
/dev_stade="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: asumpson fludwig.org.br
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Simpson A.J.G.
                                                                             BEUB2846.1 01:8473151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fel: +55 11 2704922
Fax: +55 11 2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1030.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96.44%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6.77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           47. 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16.94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence Lags
                                                                                                                                                                   Hollo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                 Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
  BE082846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19970707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       All quillion | Sectors:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              printy Matche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sour Ce
                            NELLINITES N
                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tree, No.
                                                      ACCESSEON.
                                                                                                                                                                                                                                                 Y X Y Y Y Y
                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDILI NE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOHN WALL
                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PEATURES
                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N.: WWC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NICH
                                                                                                                                      H. MIN'S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
```

```
/note="Vector: pl718b-Pac (Pharmacia) with a modified polylinker: 1st strand cDNA was prepared from mammary gland tissue from a lactaring female, and was then primed with a Not I = oliae(dI) primer. Double stranded cDNA was ligated to Eco ET adaptors (Pharmacia), digested with Not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST 29 APR 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus muscullus
Enkaryota: Metazoa: Chordata: Craniata: Vertebrata, Enteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 832)
NCI-CGAP http://www.ncbi.nim.nih.gov/ncicqap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This clone was previously sequenced on the 5' end only, this new data is from the 3' end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This clone is available royalty free through LLNL; contact the IMAGE Consortium (into dimage.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                          49 FbcAspFheTyrLysValltedtaSerFhettettysAladjudjyAsnberthrArqdlu 51z
                                                                                                                                                                                                                                                                                                                                                                                                               473 LeuAspSerGlyTbrAspLeuSerPbeProTrp11eLeuAsnValleuAsmLeuLysAla 492
                                                                                                                                                                                                                        317 TTTGALTTTTACAAAGTGALGGAAGTTTTATCAAAGTAGAAGGTAATTGACAAGAGAA 25H
                                                                                                                                                                                                                                                                                                                                                                                           513 MetillelysHisLeuSluArqCysGluBtsArafleMetGluSerlamAlaHphanSer 532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         533. AspserProLeuPheAspLeu11etysGluserLysAspArgGlu319ProThrAspHis 552.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    553 LeuGluSerAlaCysProLeuAsnLeu-FroLeuGlnAsnAsnHisThrAlaAlaAspMe 572
434 GluArgLeuSerIletlinAsnPheSerIystanteuAsnAspAshIlePheHisMetSer 452
                                                                                                453 LeuLeuAlaCysAlateuGluValValMetAlathrlyrSerArqSerthrSerthnAsu 47z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A1646038 H32 bp mkNA linear EST 29 APR VW54416.x3 Soares.manmary_diad_NNLA68 Mus massedius cPNA clone IMA0E:1247610 3' similar to db.MZ6431 Mouse retinoblastema susseptibility protein (MOUSE);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                572 tTyrLouSerProValArqSerProLystystysGlyserThithArqVal 589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib-"Soares mammary_gland_NMLMG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Possible reversed clone: poly1 not found
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /sex ":emale (lactating)" // issue_type="mammary qland"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /ordanism "Mus most ulus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop: 482.
Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone-"IMAGE:1247610"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref-"taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: eqapbs-ramail.nih.qov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /lab_host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A1646038.1 G1:4724513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tumor Gene Index
Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8.42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGI:661298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A1646038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A1646038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COCUS
                                                a
                                                                                                                                                                                              ò
                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
```

```
Library,
I and cloud into the Not I and Eco RI sites of the modified privary worter. Library 1s normalized. Library was constructed by Hento Soarcs and M. Patima Honaldo.

Was 770 c. 176 g. 214 t. 6 others
                                                                                             z66 a
```

102 E90EyrslufleAspThrSerThrLysValAspAsnAlaMetSerArqLesLeuLysLys 121 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1 201 47 CASSACACOGCOCOCOSAAGACOGCOCOCOTAGACOASCOTAGAGATTAGAGAAATTGAAGAA 106 107 CCCGAALITATTGCATTAIGICAAAAGTTAAAAGTACCGATCATGTGAGAGAAAAACT 166 12z tyrAspVall.cuPhcAlal.cuPheSort.ysLeuGluArgThrCysGluLculleTyrl.cu 147 142 throtherosersersertleserThrGlutleAsnSerAlaLeuValLeuLysValSer 161 527 LOGATOACETTNITTACTAGCTAAAGGAAGTATTACAGATGGAAGATGAGGTGAGGTGATTC 586 587 TCAATTCAGCTAATGATGATGTGTGTGATTTTTAT-AAGTTCTCACCTCCTGCACTA 645 202 LoutysGluProfyrtysThrAlaVallleProfleAsnGlySorProArgThrProArg 221 222 ArgdlydlnAsnArgSerAlaArg1leAlaLysGlnLeuGluAsnAspThrArg1le1le 241 705 AGAAGICAGAAAANGACCCCTCTCTGATAGCAAACTAGA-AATGATAGGATGATTATC 764 22 ProAspPheThralaLeuCysGlnLysLeuLysTleProAspHisValArgGluArgAla 41 42 IrpLeuThrTrpGluLysValSerSerValAspGlyValLeuGlyGlyTyrIleGlnLys 61 62 TystysGluteuTrpGlylleCystlePhetteAlaAlaValAspieuAspGluMetSer 81 2 GlnAspsorGlyProGluAspLeuProLeuValArgLeuGluPheGluCluThrGluClu 21 832 217 17 29 5 Conservative: Mismatches: Indels: Length: Matches: 124 459A-29 (1-895) x A1646038 (1-832) 4.226.100 1029.00 88.64% 82,20% 22,30% 262 AsnPhellePro 265 814 AAAAITAICCCT 830 Most Lucal Similarity: Percent Similarity: Aliqument Scores: Query Match: N ... E ed. Ē Ś 3 â 57 Ê Š 3 <u>-</u> Š Ē õ Ŝ

```
1 (bases 1 to 623)
Melton, D., Meadows, A., Clifton, S., Hillier, L., Marra, M., Pape, D.,
Wylie, J., Martin, J., Blistain, A., Schmitt, A., Theising, R., Ritter
F., Renko, L., Pennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole
R., Tsaqareishvill, R., Williams, T., Jackson, Y. and Bowers, Y.
Washu-Harvard Pancreas EST Project
                            EST 14 MAR-2012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: dmeiton∂bíohp.harvard.edu
Libraries were constructed by Dr. Douglas Melton
DNA sequencing by: Wishington University Genome Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       For information on obtaining a clone please contact: Juliana Brown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Site_2: Sall; Library constructed using superscript.
Plasmid Library kit (Life Technologies), cDRA made by olive of Filming. Size selected by column fractionation; arerage insert size 1.08 kb. Primary library, unamplified.

a 109 g 186 t lothers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (brown@las.harvard.edu)
This sequence now available from the IMAGE consoltium, for clone orders contact, infolimage.llnf.gov
                                                                                                                                                                                                                                                                Home sapiens
Eukaryota, Metasoa, Chordata, Craniata; Verrebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note "Organ: Pancreas; Vector: pSPORT1; Site_1: Not 1;
                      AWS#1331
Tallbd9.yl Human Pancreatic Islets Homos sapiens cDNA -clone
IMAGE:56.8649 5. similar to qb.m15400 RFITNORIASIOMA-ASSOCIALED
PROFEIN (HUMAN): qb:m26391 Mouse retinoblastoma susceptibility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   238 HisArgile.leGlavalueacystysGluHisGla?ysAshIllAspGlavalLysAss 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           258 ValTyrPhoLysAsnPholloProPheMctAsn+Sert.cu31yl.cuValThrSerAsnol 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       277 yLeuProSluValGluAsnLeuSer5ysArgTyrGluGluIleTyrLeufyeAsnLysAs 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 ACAAGATTATTGAAGTTGTCTGTAAAGAACATGAATGATAATATAGATGAGAAAT 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone-"IMAGE:5638049"
/clone_lib-"Human Pancreatic Islets"
/lissue_type="Islets of Langerhaus"
/dev_stage="Adult"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Argarism-"Homo eaptons"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Seq primer: -40RP from Gibco
High quality sequence stop: 430.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-026-459A-29 (1-895) x AW583181 (1-623)
                                                                                                                                 protein (MOUSE):, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    109 g
                                                                                                                                                                                 AW583181.1 GI.7260125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6.87e-99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1016.00
98.078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97.10%
22.02%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tel: 617-495-1812
Fax: 617-495-8557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bost Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MA 02138
                                                                                                                                                           AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                  DEFINITION
                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                    VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
```

```
vw54bolin Soares mammary quand NMLMC Mus musculus craw close
IMAGE:1247665 5' similar to gb:M15400 RETINOHLASTOMA-ASSOCIATED
PROTEIN (HUMAN): qb:M26491 Mouse retinoblastoma susceptibility
An764485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Maria, M., Hillier, L., Allen, M., Howles, M., Diettich, N., Dubuque, L., Garsel, S., Kneabar, L., Lary, M., Martin, J., Morris, M., Schollenberg, K., Steptone, M., Lan, F., Underwend, K., Moore, B., Theising, B., Wilson, R., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia; Butheria; Rodentia; Sciuroquathi; Muridae; Murinae; Mus.
1. (bases 1-to-871)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    this clone is available royalty-free through LLML; contact the IMAGE consortium (info'image.llnl.gov) for further information.
                                                                                               12.4 ACTICCAGAGGGTGAAAAFCTTGTAAAGGATAGGGAGAAATTTATGTTAAAAAATAAAAGA 182
                                                                                                                                                                     417 rPhechafhrahnArqfhrProArqfysSerAsnLeuAspahaGlaValAsnValIlePr 337
                                                                                                                                                                                                                                                                       9.7 oProHisThrProValArgThrValMetAshThrIleGlnGlnLeuMetMetIlleLeuAs 357
                                                                                                                                                                                                                                                                                                                803 TOCACACACTOCACTTAGGACTGTTATGAACACTATCCAACAATTAATGATGATTTAAA 362
                                                                                                                                                                                                                                                                                                                                                                                         417 IArqLeulyrfyrArqValMetGluSerMetLeuLysSerGluGluGluArgLeuSer11 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             297 plandspaladrefondrofocodsphisdspizysthricogforbraspsarricaspse 317
                                                                                                                                                                                                                                                                                                                                                                    357 nSerAlaSerAspGlnProSerGluAsnLeufleSerTyrPheAsnAsnCysThrValAs 377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 377 abrotyaolusertletertys\Lambdara\Lambdara\Lambdaaltys\Lambdasp\Gammalecty\sigmayrtlerbetys\sigmatlysph_{1}397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.2.3. TOPAAAAGAAAGTATACD GAAAAGAGTGAAGGATATAGGATGTOTN AAAGAGAATT - 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   497 eAlaLysAlaValGlyClnGlyCysValGluIleGlySerGlnArqTyrLysLeuGlyVa 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Testis, M. 63108
                                                                                                                                                                                                                                                                                                 Washington University School of MedicineP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -28ml4 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4444 Forest Park Parkway, Box 8561, St
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Maria M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mouseest *Watson. Wusti.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The Washill HIMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         High quality sequence stop: 495.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Washu HBMI Mouse ESI Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA763485.1 GI:2813232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.7 edlnAsnPheSerLysLeu 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 503 TCAAAATTITAGCAAACTT 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              414 286 1800
414 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sed primer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fax
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOUTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NOT LINE TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -- RCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA76.1485/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AHIMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAUKNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               - NIMMIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET, ST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                 =
                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                 \mathcal{X}_{\mathcal{C}}
                                                                                                                                                                                                                                                                                                                                                                                                             =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
```

/organism "Mus musculus" /db.xret-"taxon 16896"

```
polylinker; ist strand-dNN was prepared than mommary dand tissue from a lactating towale, and was then primed with a Not 1 - Olique(df) primer. Double-stranded cDNA was lighted to Bro NE adaptors (Pharmacia), digested with Not modified pT7T3 vector. Library is normalized. Library was constructed by Bento Soures and M. Falima Bonaldo."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               402 lyGlaGlyCysValGlurleGlySerGlnAraTyrCysLeschlyValAraLes-TyrTyrA 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              542 Insertysasparagludtyprothrasphistandluseralafysprofenashtanp 562
                                                                                                                /note-"Vector: pT7T4D Pac (Pharmacia) with a modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 323 ThrProArgLysSerAsn LeuAspGluGluValAsnVallleProFroHisThrProV 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       362 InProSerGluAshLeulleSerfyrPheAshAshCysThrValAshFroLysGluSerl 3B2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 744 GCCCATCCGAAAATCTTGTTCCCTTCCATATGTCCCGTTACCTCCAAAGAAAAATC 685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            382 TeleulysArgVallysAspileOlyTyrHerbelysCludysFbcAlulysAlaValG 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        684 TCCFAGGAGCTTAAAGGTTGTGCCGACCCTTTAAAAGAGAGGTFTTAAAGAGAGGTGTGTGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           624 GCCAGGGCTGTGTGACATCGGAGTACAGCGATATACATTGGAGTGCGATTGTATTACC 565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       422 rqValMetGluSerMetLeuhysSerGluGluGluArghenserTleGluAnhesert. 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            442 ystemieuasnaspasnilePheHisMetSertemianalaCysalatanGlnValValM 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           502 hellelysAlaGluGlyAstdeulhrArqGluMetilelysHisbeuGluArqCystluH 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     324 TTATICAAAGTGGAAGCGAACTTGACAAAAAAAATGATAAAAAATTTAGAAAGATGTGAGC 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 522 isArqileMetCluSerLeuAlaTrpLeuSerAnpSerProLeuPheAnpLeuJeLysd 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    342 alArgThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAspG 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           803 THGG-GOOGHETTGALACLACTOCACCATTANGGONGHILHAALIHOOCOAAGIALCA 745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        860 AGCCCAAGGAAAAACAACCCCTTGGGAGGGGCCAACGGGTTTTAGCCCCTACAI
/clone-"IMAGE:1247665"
/clone_lib-"Soares_mammary_aland NMLMG:"
/sex-"female (lactating)"
/tissue_rype-"mammary_gland"
                                                                                                                                                                                                                                                                                                                                                                                                                            Connettative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                       Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels:
                                                                                                                                                                                                                                                                                                                                                                                  Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-026-459A-29 (1-895) x AA763485 (1-871)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                            /lab_host-"DH10H"
                                                                                                                                                                                                                                                                                                                                                                                2.41e - 98
1013.00
                                                                                                                                                                                                                                                                                                                                                                                                                         77
                                                                                                                                                                                                                                                                                                                                                                                                                                              74.488
                                                                                                                                                                                                                                                                                                                                                                                                                              £
                                                                                                                                                                                                                                                                                                                                                                                                                                                Hest Local Similarity:
                                                                                                                                                                                                                                                                                             o
                                                                                                                                                                                                                                                                                                                                                                                                                         Ferrent Similarity.
                                                                                                                                                                                                                                                                                                                                                           Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                         Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
```

Search completed: January 19, 2003, 05:05:21 Job time : 1994.1 sers

Genfore version 5.1.3 copyright (c) 1994 - 2003 Compugen Ltd.

Per protein nucleic search, using frame_plus_p2n model [Ron on: January 17, 20st, 18:27:24 (without alignments) 7:20,587 million cell updates/section of the search of th	.51113
--	--------

Pronument line parameters:

Monoti, frame parameters:

Monoti, frame parameters:

Monoti, frame parameters:

Monoti, frame parameters:

Monoti, frame parameters:

Monoti, frame parameters parameters parameters

Monoti, frame parameters parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Monoti, frame parameters

Mono

em_dss_mus:* em_dss_othor:* em_dss_pro:* em_qss_rod:* •m.488, mam: ▶ em_qss_bum:* em_dss_inv:* em_qss_vit:* em_qss_fun:* qb_ost4:*
qb_ost5:*
em_est1un:* em estin: em estov: em estov: em estov: em estro: ⇒:woisa_ma em_esthum:• ab est 2:* ab_hte:* 4b_08t 4:* qb estl:* db_dss: *: 183 batabase

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Result No.	π]t No.	Score	Query Match	Ouery Match Length	DB	ID	Description
	-	1551	38.6	1051	-	BM561083	BM561083 AGENCOUR
	7	1448	9e.0	88		HQ220275	
	~	1289	3.2.1	1001	~	BM475603	BM475603 AGENCOURT
	4	1254	C1 ·	() ()	ç	ALC 97811	ALCO7811 DKFZp 4140
	٠ - ٠	.4.	ତ. ଜ.୦୫	1 46.4	Ξ	AK011246	AKO11246 Mus museu
	æ r	1236.5	æ. ⊋:	သုံး ဆောင်		800000	
	~ :	1208	- 0	æ æ	<u> </u>	BM45 47.24	BM454724 ACHINCOURT
	xo ·		/ : / ?	1023	<u>~</u>	BM450031	BM450031 AGENCOURT
Ċ	ۍ :	1056.5	¢ :	914	, می	AA76 44 1 1	AA76.8411 vw54a04.1
L	= :	1043	26.0	792	. س	AL56 47 57	ALS64757 ALS64757
	Ξ.	1037	25.8	605	5	AL599644	AL599634 DKFZp413P
Ü	7	1030	25.6	694	0	BE082846	BER82846 RG2 BT064
	~	1016	25.3	623	2	AW583181	AW584181 iallh09.y
ن ن	7	101	25.2	871	5	AA763485	AA76.4485 vw54h01.1
	13	1004	0.00	33£	: 1 - 1	BG253543	BC 7 40 500 5 40 5 50 7 50 50 50 50 50 50 50 50 50 50 50 50 50
	1,6	978	24. 4	588	10	AW168214	AW 4682.44 CM 4 - HT018
	17	662	23.9	7.46	~	B1151568	80191568 6029181
	æ	626	23.9	26,5	_	AV715533	AV/15544 AV715544
	7	955	23.8	584	12	BG149050	v [0.588.00 0.00.00]
	20	947.5	9. 28.	7.34		BF144857	BF 44857 60174034
			: ^\ : ^\ : ^\	5.80	ا ح	AL692790	ALE92790 DKI203141
	C1	908	40 CE	797	=	BE539278	C937-90109 - 8005-5-508
	ř	88	(C)			A: 120941	
	2	879.5	6.[2	7.34	~~	81526982	CC CC5CC CK5CC XX
	и: 1 С	6.000	 	1 (1) (1)		BC244588	131 RSF (00) BX07770X
1		20,000	-	7.5	-	H. 413.16	STOLES ON SECTION
Ų	27	844	21.0	484	=	BE168095	
	ထ	833,5	20.7	646		BM430416	18M490416 Guran nk
	6.0	824		56.4	0	AMBOURS	ONG SHIP IN COUNTY
	3.0			C# C# UT	اس	AAU72780	AAC7278G mm76405.T
	3.1	784		2083	~	BM456728	BM45672B ACHNOOMEN
	S.	751		453	10	AW503514	AW503514 U1-HF BN0
C	 ()	584	17.0	438	्	BP827047	BF827047 RC3 HN002
	3₹	581.5	17.0	566	14	082304	C82404 C82404 Leuk
	35	667	16.6	651	~	BI696841	B1696841 603344967
	3.6°	599	16.4	180	2	AW9516.04	AW951604 EST464674
	37	633	15.8	425	7	BE285796	BE285796 601096510
	æ	628	15.6	672	~	B1868459	DEF 2614 0.3 - 6.03 4.92 4.30
Ç	36	626	5.5	521	7	BF466546	BF466546 UI M-CGO
Ü	0 4	625.5	15.6	187	1.2	BF998490	8F998430 CM2-GN018
د	4]	613	15.4	415	5	A1745644	AI745644 1124b06.x
Ü	4.2	611	15.2	410	1.5	8F560103	BESCOIDS UL R Al c
U		609	15.2	411	Ţ	A1745644	A174564 4 11 24 bo5. x
		ĽΩ.	14.8	580	5	AL599105	ALS99105 DKFZp 41 4G
¢	7 2	2 V V 2	~	7 + 7		REMOMONAL	Landa a Maria a Markanata

RESULT 1 BM561083	
LOCUS	BM561083 1051 bp mRNA linear EST 20-FEB-2002
DEFINITION	AGENCOURT_6566133 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:5550905_57, mRNA sequence.
ACCESSION	BM561083
VERSION	BM561083.1 G1:18806043
KEYWORDS	EST.
SOURCE	human .
ORGANISM	Homo sapiens
	Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euroleustomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo
REFERENCE	(bases to 1051)
AUTHORS	NIH MGC http://mac.nci.nih.aov/.
TITLE	National Institutes of Bealth. Mammarlian General Leating (Magnetical Company)

AL LCNMENTS

```
#8 ..
                                    3
                                                                                                                                                                                                                                                                                                        ζ
                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                  <u>ئ</u>
-،
                                                                            ë,
                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0.75
                                                                                                                                                                                                                                                                                                                                                                            Anote-Torgan: eye; Voctor: powy-Spoers, Site_1 Noti,
Site_2: Sall; Cloned unidirectionally. Primer: Oligo df.
Avorage insert size 1 75 kb library postrupted by life
                                                                                                            UNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the L.M.A.G F. Consortion/ClNI at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        124 ITIAGCAAACTICTGAATGACATTTTCATATGTCTTTATTGGCGTGCGTTCTTGAG 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    244 TCTTTCCCATGGATTCTGAATGTGCTTAATTTAAAAGCCTTTGATTTTTACAAAGGGATC 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    424 ATTAAACAATCAAAGGACCGAGAAGGACCAACTGATCACCTTGAALCTGTCTCTT 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          446 AsmicuProLeuGInAsnAsnHisThrAlaAlaAspMctTyrLeuSerProValArySer 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            286 AlaValGlyfleGlyfysValGlaff#flySmrfleAr4TyrLysLeuGlyValAr4fea. 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      306 TyrTyrArqValMetGluSerMetLeuLysSerGluGluGluArqLeuSerIleGlnAsn 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      346 ValValMetAlaThrTyrSerArqSerThrSerGlnAsnLeuAspSerGlyThrAspLeu 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  466 SerPheProTrpIleLeuAsnValLeuAsnLeuLysAlaPheAspPheTyrLysValIle 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            48f SlušerPhellelysAlaGluGlyAsnLeaThrArgGluMetTlelysHistesSlaArg 485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40% OysoloHisArqIleMetGluSerLeuAlaTrpLeuSerAspSerPtoLeuPlaAspLeu 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              426 HetysvinseriysAspArqvivolyProThrAspHisLeugluSerAlaCysProLeu 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 thers
                                                                      CDNA Library Proparation: Life Wechnologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          - 2 H8
                                                                                                                                                                                                                                                                                                                      /clone_lib="NIH MGC_67"
/Lissue_lype="relinoblastoma"
/lab_host="DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative.
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                    Average insert size 1.75 kb
Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 660
                                                                                                                                                                      http://image.linl.gov
Plate: LLAM12263 row: m column: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  indels:
              Contact: Robert Strausberg, Ph.D.
Email: cqapbs-r@mail.nih.gov
Fissue Procurement: ATCC
                                                                                                                                                                                                                                                                  /orqanism "Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26 459A-37 (1-7P1) x PMS61083 (1-1051)
                                                                                                                                                                                                          High quality sequence stop: 737.
Location/Qualitiers
1. .1051
                                                                                                                                                                                                                                                                                                        /clone-"IMAGE:5550905"
                                                                                                                                                                                                                                                                                    /db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                        197 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5.230-157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1551.00
93.26%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              38.618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              91.50%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Asignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Janety Match:
                                                                                                                                                                                                                                                  Souther
                                                                                                                                                                                                                                                                                                                                                                                                                                                            LND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Prod. No.:
J. STRNAL
                                                                                                                                                                                                                                FEATURES
                  MMEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          i SE
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ť
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ÷.
```

```
B0220275
AGENGTHET FF22621 NIH_MGC_32 Ham. Supjects CONA COLLE IMAGE COLATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue_type="exbr; onal carcinoma, cell line"
//lab_host="DH10B (phage=resistant)"
//note="organ: testis: Vector: pCMV-SPORT6, Site_1: Not1:
Site_2: Salt; cloned unidirectionally; olido dI primed.
Average insert size 2.5 kb. Library enriched for
full-length clones and constructed by Life Technologies.
Note: this is a NHI_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 881)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by Agencourt Rioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                      486 ThrSerAlaPhcOnthrChipsPrehentysSerThrSerLeuSerLeuSerUptys 505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             566 tysValtysas.tleasp teutysfactysficticValthralatyrtysaspteuPr 585
HIIIIIII:::[HIII] [11] [HIIIII]:::(HIIIIIII)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  585 offisalaValdiscluth:PkeLysArgVal-LeutleLycGludluslu-TyrAspSer 604 | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HIL
                                                                                                                                                                                                                                                                                                                                                                                                                                          50b LysValfyrAngleuAlafyrLeuArgLeuAsnfhrLeuCysGluArgLeuGeserGlu 525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      526 HisPredukenSluHisIleIleIleTipThileauPheSluHisThileaGlaAsaSlaTyr 545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   546 SlutenMetargaspargHistenAspGlnTeMetMetCysSerMetTyrGly:TeCys 565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 844 AAAGTGAAAGATATAJACCTTAANATTCAAAATCCTTGTAACAGCATACCAGGAFCFFCC 903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NIH-MS2 http://mgschsi.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (M3C)
Unpublished (1999)
466 ProLysLysLysGlySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGlnAla 485
                                                                                                      544 CCAAAGAAAAAGTICAACIACGCGTGTAAATTCTACTGCAAATGCAGAGACACAGAGA 603
                                                                                                                                                                                                                                                                                                                        604 AUCTUAGULIQUAGAUGUAGAAGGUAIIGAAALULAUCIGICITICAQIGITITATAAA 663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                964 TATATAANATIPCTATAAPTCSSSPPTITCATSCAASSASASTGAAAAACCAAATA 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PhcTyrAsnSerValPhcMetGlnArgLeuLysThrAsnlle 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA Library Preparation: Life Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plate. Li.AM: 3287 fow. c column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib="NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence stop: 690.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:9606"
/clone="IMAGE:6044522"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: cqapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5', mRNA sequence.
by220275
HO220275.1 C1:20401675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ರ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               605 Ileileval
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HO220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80220275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
```

```
ž.
Ž.
```

Alignment Fred. No.: Scores Percent Si Hest Local Query Mater DB:	Scores: :: similarity: il_Similarity: ch:	5,744-146 1448.00 28,008 97,968 45,058 14	Length: Matches: Gonservative: Mismatches: Indels:	ВН1 1 2 2 0 0	
US 019 026	459A 87 (1.78	I) × Buzzozzs (1-881)		
97 51 18	Met Gluaspaspu 	CUVALLICEOTRICS FILLILLILLICA TOSTOALTICATITE	- i ⊢	Hou asplyr thelle Hillilililili Scifgacrafftraff	80 8
\$ 40 40	LysteuSerProP 	roMet LeuLeuLysS HIELLIILLILLI COALGIIOCICAAAG	LysteuSerProProMetLesteutysGlaProTyrtysThsThrAlaValTleProTL6A 	aVallleProlleAsn 	100
0y 101 pb 12+	GlyserProArdT 	hr ProArqArqG1yG 	81ySerProAraThrProAraAraG1yG1sAssaArgSerAlaAraTleAlaLysG1nLeu 	#IleAlaLysGlnLeu 	120
UZ 121 Db 18+	GluAsnAspThrA 	rqllelledluVall. 	.cuCystysGluHisGl 		140 242
	ValLysAsnValT 	yrPheLysAsnPhel 	leProPheMetAsnSe 	rLeuglyLeuValThr 	160 302
Oy 161	SerAsnGlyLeuP HitHITHITHIT TOTANGACTTC	roghuValGluAsnL 	euSerLysArgTyrG1 	uGlufleTyrLeuLys 	180 362
9.9 181 105 36	AshlysAsplena 	spalaard cubber 	enAspHisAspLysTh 	rioudinibraspser IIIIIIIIIIIIIII ICIICAGACIGAIICI	200 422
UY 201 bb 42	TheAspserPhed 	luthrolnArgthrP 	roArqLysSerAsnLe -	uAspiluGluValAsn 	220 482
99 221 Db 48	ValileProProH 	isThrProValArgT ACACLCCAGITAGGA	hrValMetAsnThril 	eGlaGlaLeuMetMet. 	240 542
		Laser Aspellebros 	ordinasmentesse HTILLITETTILLI CAGAAAAFCTGAITTC	24] HetrubariseratuskeraspolietroskeriluasidenHeskertyribioasinasioys 260 	260 602
27 261 Ub 60	ThrValAssPreE 	ysslyseriletest Hillilililili AAGAAAGIATACIGA	ysAraVallysAspil 	edlyfyrilePhelys Fillilittillill AGGALACATCHTRAA	799 799
. 993 - 401 105 - 666	TelefysPheAlais THITHIHHH GAGAAAIHGGIA	%8AlaValG1yG18G 	:lycysValdluiledi 	ySerclnArgTyrLys 	300
C7 401	LenglyValArqb 	eulyr Lyr Ar gyallm FELLELLELLELL TGI ATTACCAGI AA	letGluSerMetLeuly - - - - - - - - - - - - - - - - - -	sSerGluGluGluArq 	320 782
	Leuserlledin HIIIIIIIIII HIAIOTALICAAA	snPheSerLysLeuL 	euAsnAspAsnIle P 	hellisMetSer·LeuL 	340 842
Oy 440) enAlaCysAlaLe }!!!!!!!!!!!!	enAladysAlaLenGluValValMetAlaThrTyrSer 	aThrTyrSer 352 		

RESSULT 3

EST 05 FEB-2002 AGENCOURT_6480007 NIH_MGC_92 Homo sapiens clara close IMAGE:5575683 /note-"Organ: testis: Vector: pGMV-SFORI6: Site_1: Noti: Site_2: Sail; Cloned unidirectionally; oligo-dr primed. Average insert size 2.5 kb. Library enriched for full-length clones and constructed by Life Technologies. Note: this is a NHLMGC Library." Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 80 eLysLeuSerProProMetLeuLeuLysGlaFroTyrLysThrAlaVall1ePro[]eAs 100 NIH-MAX bitps//mqc.nci.nih.gov/. National institutes of Health, Mammallan Gene Collection (MGC) cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL.) DNA Sequencial by. Apercount Bicostiente Composation Clone distribution: MrG clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at: 17 IAAACTCTCACCTCCCAIGIIGCTCAAAGAACTAIAAAAGAGTGIIAIAAATAA 376 40 rAlaLeuValLeuLysValSerTrpllethrPheLeuLeuAlaLysGlyGluValLeuGl 60 20 qThrCysGluLeuIleTyrLeuThrGluProSerSerSerIleSerThrGluIleAsnSe 40 1 MctSerArgLeuLeuLysLysTyrAspValLeuPheAlaLeuPheSerLysLeu GluAr /tissue_type-"embryonal carcinoma, cell line" /lab_host-"DH10B (phage-resistant)" CONA Library Preparation: Lite Technologies, Inc. Conservative: Mismatches: I KNA Plate: LLAM12326 row: f column: 04 Matches: Lenat h: indels: US-09-026-459A-37 (1-781) x BM475603 (1-1001) Contact: Robert Strausberg, Ph.D. /organism-"Homo sapiens" High quality sequence start: 17 High quality sequence stop: 744. Location/Qualitiers /clone_lib-"NIH_MGC_92" 1001 bp Zelone="IMAGE: 5575684" /db_xref-"taxon:9606" Email: cqapbs-ramail.nih.qov Tissue Procurement: Alcc BM475603.1 GI:18524645 http://image.llnl.gov 1.19e - 128(bases 1 to 1001) 1289.00 93.94% 91.25% 32.09% 5', mkNA sequence. BM475603 Unpublished (1999) 1, .1001 Homo sapiens Best Local Similarity:
Ouery Match: 349 a BM475603 Percent Similarity: human. Alignment Scores: source DEFINITION ORGANISM BASE COUNT Pred. No.: ACCESSION REFERENCE AUTHORS JOHENAL BM475.603 KEYWORDS · FEATURES VERSION TITLE COMMENT OKICIN SOURCE 1,00008 ò 9 ò qq ô a ò 9 ć

```
130 g
                                                                                                                                                                                                                cDNA-collection
                                                                                                                                                                                                                                                                                                                       4.44e-125
1254.00
99.599
99.599
31.228
                                                                                                                                                                                                                                    161 C
                                                                                                                                                                                                                                                                                                                                                                                      Hest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                     Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                         Pred. No.:
                      FEATURES
                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          : T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ě
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ö.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ALSWIRL HAND TACK HAND THEORY HONG-2001 DEFY/PRINGPRESCHARCE CONC. SALEGOOD F. , MPNA SEQUENCE. HONG SAPICHS CONC. ALGORITHM SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 727)
Poustka,A., Wellenreuther,R., Mewes,H.W., Weil,B. and Wiemann,S.).
ESI (Poustka,A., Wellenreuther,R., Mewes,H.W., Weil,B. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
Eukaryota: Metazoa, Chordata, Craniata, Vertebrata- Euteleostomi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Heidelberg/Germany) within the ≏PNA sequencing consortium of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No si sequence available
This clone (DKFZB113c9816) is available at the KZFD in Herlin.
Please contact the KZFD: Ressourcenzentrum, Heubmerweg 6, 14059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Conton (DREZ): Duail S Wiemannad&for heideliberg do
1.0 nGiySetProArgThrProArgArgGlySInAsnArgScrAtaArg1?eAta1.ysGInLc 120
                 TSGITCACCICSAACAPCRASCAGGGGGGGGGGGGGGGGGGGGGGGGGAIASCAAACAACI 436
                                                                                  1. astuAsnAspThrArqIleIleGluValLeuCysLysGluHisGluCysAsnIleAspGl 140
                                                                                                       140 uValLysAsnValTyrPheLysAsnPheIleProPheMetAsnSerLeuGlyLeuValTh 160
                                                                                                                                                                                                                                                        :SerAsnGlyLeuProGluValGluAsnLeuSerLysArgTyrGluGluIleTyrLeuLy 180
                                                                                                                                                                                                                                                                                                                                         1^{80} \text{ sAcctysAspleuAspAlaArgLeuAspHisAspLysThrLeuGlnThrAspSe} \text{ } 200 \text{ } \\
                                                                                                                                                                                                                                                                                                                                                                                                                                                  22d nVallieProProHisThrProValArgThrValMetAsnThrileGinGinLeumetMe 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240 tileLeuAsnSerAlaSerAspGlnProSerGluAsnLeuIle-SerIyr-PhcAsnAsn 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.7 GHGAAAAAIGITTAITICAAAAATITTATACCITTTATGAATICTCTGGACTTGTAAC 556
                                                                                                                                                                                                                                                                                                 ATCTAATGGACTTCCAGAAGTTGAAAATCTTTCTAAACGATACGAAGAAATTTATCTTAA 616
                                                                                                                                                                                                                                                                                                                                                                                   617. AAATAAAGATOTAGATGOAAGATTATTTTGGATGATGATAAAAOTOTOTOGATGATTG 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     280 CysThrVal-AsnProLysGluSerIleLeuLysArg-----ValLysAspIleGlyTy 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               857 IGCACCGIGGAAICCCAAAAGAAACCTAIACCGGAAAAGAAAGGAAGGTAAGGAAIAIAGGAAI 916
                                                                                                                                                                                                                                                                                                                                                                                                                            200 rlleAspSerPheGluThrGluArqThrProArgLysSerAsnLeuAspGluGluValAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequenced by DKFZ (German Cancer Research Center,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          x^{17} rile----Phetyschitys- PheAlatysAlaValGty 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: poustkasmpimq berlin-dahlem.mpg.de
This is the 5' sequence of the clone insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Department Lehrach
Max-Planck-Institute for Molecular Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Thurstrasse 73, 14195 Berlin, Germany
Tel: -49-30-84131623
Fax. -49-36-84131128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AL597811
AL597811.1 GI.15160502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Poustka A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Serman Genome Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .s.)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  հստոոր.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DRIGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RELERENTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTH JES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    J. CENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   211.00 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                      1
                                                                                                                           i
                                                                                                                                                                                                           =
                                                                                                                                                                                                                                                                                                                                           ŝ
```

```
/clone="DKFZp31300816"
./clone_lib="313 (synosym: blcc2)"
./dev_stage="adult"
./lab_host="DH10B"
./note="Vector: pTriplEx2; Site_l: SLIIA; Site_2; SLIIB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        46.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6.45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6.11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             516 AsmThrLeuCypGluArgLeuLeuSerGluHisFroGluLeuGluHisIleIleTrpThr 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              536 LeuPheClnHisThrLeuGlaAsaGluTyrGluLeuMetArqAspArqHisLeuAspGln 555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      596 LeulleLysGluGluGluTyrAspSerileileValPheTyrAsnSerValPheMetGla 615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 AAATCIACCICICITICACIGIIIIAIAAAAAAGIGIAICGGCIAGCCIAICICCGGCIA 6)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      496 LysScribiScricuScricuPhcTyriystysValTyrArgicuAlaTyricuArgicu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  616 ArgleulysThrAsnileLeuGlnTyrAlaSerThrArgProProThrLeuSerProlle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              676 ThriysMetThrProArgSerArglleLeuValSerlleGlyGluSerPheGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                716 AlaGluGlySerAsnPreProLysPreLeuLysLysLysLeuArqPheAspileGluGlySer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  576 IleIleValThrAlaTyrLysAspLeuProHisAlaValGlnGluThrPheLysArqVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            542 ACABABATGACTCCAAGATCTAGIAITAGIAICAATIGGIGAATCATTCGGGACTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              696 GlubysPheGlubysileAsuGluMetValCysAsuSerAspArqValLeutysArqser
Berlin-Charlottenburg, GERMANY, Email: elone*rzpd.de.
Location/Qualifiers
                                                                                                                                                                                                                                                        727
241
0
1
0
                                                                                                                                                                                                                                                                                         Conservative:
Mismatches:
                                                                                                                                                                                        198 t
                                                                                                                                                                                                                                                                            Matches:
                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                        Length:
                                              /organism-"Homo sapiens"
/db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                       US-09-026-459A-37 (1-781) x AL597811 (1-727)
```

736 AspGlu 737

Ôγ

```
Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                  .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kiawai, J., Shihaqawa, A., Shibata, K., Yoshino, M., Itoh, M., Ishii, Y., Arakawa, T., Hara, A., Eukunishi, Y., Konno, H., Adachi, J., Fukuda, S., Arakawa, T., Hara, A., Eukunishi, Y., Konno, H., Adachi, J., Yamanaka, I., Salito, T., Ishita, T., Sanda, T., Salito, R., Matsuda, H., Ashounter, M., Hatalov, S., Casayant, T., Kadota, K., Matsuda, H., Ashounter, M., Hatalov, S., Casayant, T., Kuchi, P., Lewis, S., Matsud, I., Gissi, C., King, H., Kochiwa, H., Kuchi, P., Lewis, S., Matsud, I., Gissi, C., King, H., Kochiwa, H., Kuchi, I., Lewis, S., Matsud, P., Sakali, F., Suzuki, R., Tomita, M., Hadute, L., Mashio, F., Sakali, K., Okido, T., Furuno, M., Aono, H., Hadute, L., Mashio, F., Sakali, K., Okido, T., Furuno, M., Aono, H., Hadute, C., Fujita, M., Gariboldi, M., Castincich, S., Hill, D., Hotmer, D. A., Kamiya, M., Lee, N.H., Lyons, P., Nordone, E., King, R., King, R., King, R., Kamiya, M., Lee, N.H., Lyons, P., Nordone, E., King, R., Schonbach, C., Seya, T., Shibata, Y., Storch, K.F., Suzuki, H., Woltz, C., Whittaker, C., Milming, L., Wishida, X., Winshida, X., Wishida, X., Wilming, C., Whittaker, C., Williama, V., Milming, L., Mata, K., Wonshida, X., Wanshida,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Carninglify, Shibata,Y., Hayatsu,N., Suqabara,Y., Shibata,K., 110h,M., Konno,H., Okraki,Y., Maramatsu,M., and Hayashiraki,Y. Normalization and subtraction of cap-trapper selected cDNAs to prepare full length cDNA libraries for rapid discovery of new genes detone Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                   ARO11246 HTC 19-JAN-2002 MANN Linear HTC 19-JAN-2002 Mus muschies to days embryo whole body cDNA, BIREN Lull-Length enriched library, close:2600912M22:reticoblastoma 1, Lull insert.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Shibata, K., Itoh, M., Aizawa, E., Nahaoka, S., Sasaki, N., Carninci, P., Kornos, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Suni, N., Ishi, Y., Nakamuras, S., Hazama, M., Nishine, T., Harada, N., Yamumioto, P., Matsumoto, H., Sakaquchi, S., Ikeqami, T., Kashiwaqi, K., Fujiwake, S., Inoue, E., Toqawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yondda, Y., Ishiyawa, L., Ovawa, R., Tanaka, T., Marsunra, S., Kawai, J., Yonda, F., Watahiki, M., Honde, Y., Mirama Su, M., Hoose, Y., Kira, A., and Hayashirahi, Y. Kirkhi, Integrated sequence analysis (PISA) system: 384-format
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mammalia: Eutheria: Rodentia; Sciuroquathi, Muridae; Muribae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wynshaw Horis.A., Yoshida,K., Haseqawa,Y., Kawaji,H., Kohtsuki,S.
and Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bukaryota; Motazoa; Chordata; Craniata; Vertebrata; Buteleostemi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Adachi, L., Aizawa,K., Akabira,S., Akimora,T., Acno,B., Arai,A.,
Arakawa,T., Baldarelli,R., Bono,B., Brownstein,M., Bult,C.,
Carninci,P., Fukuda,S., Fukunishi,Y., Furuno,M., Hanaqaki,T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-699 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (strain:05784,647) to days embays eDNA to ml
clone_lib:RIKEN tuli-length enriched mouse eDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757–1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Carminel, F. and Hayashizaki, V
heht officiency bill-lenath cBNA cloning
Meth. Enzymen, 403, 19-44 (1999)
94279233
                                                                                                                                                                                                                                                                                                                                                                                       AKU11246.1 GU:12847243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 1464)
                                                                                                                                                                                                                                                                                                                                                                                                                                     HTC; CAP Liapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clone: 2600017Mzz.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus muschlus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11042159
722 GATGAA 727
                                                                                                                                                                                                                                                                                                               Contantos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21085660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11217851
                                                                                                                                                                                                           NETTINITED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            - JR JANISM
                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PELEKEN'E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PUMMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ALLHORG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEFFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      I-JUKNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          J-XITENAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDI INE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JUNEAN L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOTHANAL
                                                                            PERMIT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                              AKU11246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   111.8
                                                                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3111
                                                                                                                                                                            N = 10S
```

```
Direct Submission
Schmitted (19 JUE 2000) Yoshibide Hayashiraki, The Institute of
Physical and Chemical Research (RIKEN), Laboratory for Genome
Exploration Research Group, RIKEN Gemomic Sciences Center (GSC),
preum Vakohama Instituto; 1 7 22 Suchirectso, Isrumer En. Yokohama,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib-"RIKEN full-length enriched mouse cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /translation-"MPPKAPRRAAAAEPPPPPPPPPPREDDPAQOSGPEELPLARLEFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ETERREFERTALGUNTANTHRYBERAMITABENVSSVINJALREIT FUNKKEILANT DIDEMPETETELELGKSTELSSVYREFIJLIKETOTSTRVUNAMSKI EKRYNVLAALYSKLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RTGELLYLLJOPSSALSTETNSMLVLK (SWTTFLLJAKGEVLOMEDDLVTSFOLMLCVVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YFTRESPPALLREPYNTAALFTNASPRIFBRONNRSARTAROLENIYRTTEVLOORHIIF
CHITTEVRNYYFRNETPFTNSLATVSSNALPEVESLSRIYYERYTENIYTARLFLOHIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KTLQTDPIDSFETERTPRKNNPDEEANVVTPHTPVRTVMNTTGGLMVTLNSASGGFSE
NLLSYFNNCTVNP"
                                                                                                                                                                                         . Quarkenbush.J.,
Hara, A., Hayatsu, N., Hill, D., Hiramoto, K., Hiracka, T., Hori, F., Hume, D., Imotani, K., Ishii, Y., Itoh, M., Izawa, M., Kasukawa, T., Kato, H., Kawai, J., Kojima, Y., Konno, H., Konda, M., Koya, S., Kuribara, C., Marsuyama, T., Miyazaki, A., Nishi, K., Mimusa, K., Numazaki, K., Ohno, M., Okazaki, Y., Okoo, H., Saski, D., Salto, R., Sakai, K., Sano, H., Saski, D., Sohina, R., Shibata, K.,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Please visit our web site (Bripy/Apprount astribus quijpy) for
further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kanaqawa 230-0045, Japan (Elmailiqonem residasiziken.go.jp,
URL:http://qenome.gsc.riken.go.jp/. Tel:81 45 503 9222,
                                                                                                                                                                                                                                                                                                                                                                                  Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zuote-"data source:MGD, source key:MG1:47874,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xret "FANTOM_DB:2600017M22"
/db_xref="MGD:MGI:1905260"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /dev_stage."10 days embryo"
1. .1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      346 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /protein_id="BAB27493.1"
/db_xre1 "G1:12847244"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xret-"MGD:MGI:97874"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xrcf-"taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             307 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /elene "2600017M22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /strain-"C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        retinoblastoma ""
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   evidence: ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.87e 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /dene-"Rb1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ×1.46.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /dene-"Rbl"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1243.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fax:81-45 503 9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      306 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96.588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10.94%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    patative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 1 36.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HOST: SOLK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
DB:
```

Gabs

1

```
/Lissuc_type-"Gably Joural carcinoma, cell line"
/lab_host-"DillOB (phage-resistant)"
/note-"Gram: testis: Vestor: pCMV-SPORT5, Site_1: NotI;
Site_2: Sali; Cloned unidirectionally; oligo-df primed.
Average insert size 2.5 kb. Library enriched for
full-length clones and constructed by Life Technologies.
Note: this is a NHH_MCC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301 TARTAATAATTATTATTAA ATTAAAATAAGAAAHGATACAAGAAHGATATAHGAAGHI 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   170 LeusertysargTyrCluCluTtTteutysasntysaspteuaspalaardteuPhe 189 HIIIIIIIIIIIIIIIIIIIIIIII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 ACATTITITATTAGCTAAAGGGGAAGTATTACAAATGGAAGATGTGTGGTGATTTGATTT (80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10 ValleuPheAlaLeuPheSerLysLeuGluArqThrCysGluLeuIleTyrLenThrGln 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30 ProSerSerSerSerThrGluileAshSerAiai.euValheufysValSerTrplle 49
                                                                                                    CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencent Biosefence Corporation Clone distribution: MGC clone distribution information can tound through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                110 GinAsnArgSerAlaArgileAlafysCinLeuCluAsnAspThrArgileHeGluVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          50 Thi PhelicaheuAhanysGlyChuVahLeuShiMetGluAspAspheuVah heserihm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               150 HeProPheMetAsnSerLeuGlyLeuValThrSerAsnGlyLeuProCluValGluAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA Library Preparation: Life Technologies, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
Indels:
                                                                                                                                                                          http://image.llnl.gov
Plate: LLAM13279 row: i column: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches.
                                    Contact: Robert Strausberg, Ph.D.
Email: cyaphs::@mail.cih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ' US-09-026-459A-37 (1 781) × HQ222227 (1-880)
                                                                                                                                                                                                                                                                                                                     /clone_lib="NIH_MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                              High quality sequence stop: 606.
                                                                                                                                                                                                                                                                                /db_xref-"taxon:9606"
/clone="!MACE:6041563"
                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.73e-123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1236.50
92.888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90.75%
30.78%
                                                                                                                                                                                                                                            .880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                           321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Perivent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ..
Q
                  JOURNAL
                                                                                                                                                                                                                               PEATURES
                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         걾
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \ddot{S}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PG22.2227 R88 Ep. mENA linear EST 02 MAY-2002 AGENCOURT_7566045 NIH_MGC_92 Homo sapiens cDNA clone IMAGE:6041563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota: Metazea: Cherdata; Craniata, Vertebrata, Euteleostomi,
Mammalia; Eutheria: Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8) 1, stein Strib Stroketia ofcompsStutroTyriysThrAlaVall1cTreffensn 100
                                                                                                                                                                                                                                                                                                                                                                                                  121 GluAsuAspThrArglielleGluValLeuCysLysGluHisGluCysAsnlieAspGlu 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            [41] VallysAshVallyrPhelysAshPhelluProPheMetAshSeri.cuG[yi.cuVa]Thr 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   [4] AsulysAsplenAspAlaArgLeuPbeLeuAspHisAsplysThrLeuGlnThrAspSer 200
                                                                                                                                                         4) AlakenValkenkySValSerTrpHeThrPheLeukeuAlakySGlyGluValkeuGlm 60
                                                                                                                     21 ThreyseluteutleTyrtenThrethProSerSerSerTleSerThreIutleAsnSer 40
                                                                                                                                                                                                                                                              *1 MetGluAspAspLeuVallleSerFheGlnLeuMetLeuC,aValLeuAspI,iFheIle 80
                                                                                                                                                                                                                                                                               **4 ALGGAAGA GACCIGGTAATCTCALTT CAGCTAATCTTGTTGTTGTGTGTAGCTATTTTATT
                                                                                                                                                                                                                                                                                                                                                                     1174 ATAGACAGITTIGAAACAGAAAGAAOGCTATAAAAAAAAAAAGTGTGAIGAAGAAGGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . 1 The AspserPheStarhrStrArgibrPrsArgigsSerAsnLcuAspGlcSluValAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           =
                                                                                                                                         25 459A 37 (1 781) x AKU11246 (1-1364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 880)
NJH-MGC http://mqc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mg222227.1 G1:20403627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5°, mRNA sequence.
BQ222227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.54 ACAGICAAI 1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  261 ThrValAsn 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PEGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A:1:H::RS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HU22227
                                                                                                                                                                                                                                                                                                                                                               ---
                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u> -</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . ~
```

129

```
RM454724 NR 835 hp mRNA linear EST 05-FEB-2002
AGENCOURT_6402743 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:5528814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /lab_host_figures of tauching /lab_host_figures of the figures of 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryo'a; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Euthetia; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cDNA Library Breparation: Life Technologies, Inc. CDNA Library Arrayed by: The L.M.A.G.E. Consort ium (LLNL) DNA Sequencing by: Apericont Bioscience Corporation CDNA connection the Conference of Stribution intornation can be teamed through the L.M.A.G.E. Consortium/LLNL at:
                                                                      481 CITICIAAACGATACGAAAAATITATCTTAAAAATAAAAGATCTAGAAGATGTATATTT 540
                                                                                                                                                         541 TEGGATCATGATAAAAGHCHCHCAGACHGATHCHALAGAGAGT FELGAAAGAGAGAGAGAGA 600
                                                                                                                                                                                                                                                                                                                                                                                              230 thrvalMetAshthrilleCinGhdenMetMetileLeuAshserAlaSerAspGin-Pr 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             561 ACTGTTATGAACACTATCCAACATTTAATGATGTTTAAATCCAGGAAGTGAAGACC 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            249 BSGGGGAShLenHerSerTyrPhcAshAshCysThrVaTAsh FroUysGluSerT 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NIH MGC http://mec.nci.nih.gov/. Nitional Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ...LysArqValLysAspIleGlyTyrIlePhe ....LysGluLysPhe 283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            781 ATACHISAAAAAAAGSAAAGBAHATAAGBHAAGATTGTTAAAAAAAAAAHTT 839
                                                                                                                                                                                                                                    210 ProArqCysSerAsnLenAspOloGloValAsnVal11eProProHisThrProValArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Н 35
244
5
12
7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib-"NIH_MGC_72"
/tissue_type-"melanotic melanoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             bttp://image.llnl.gov
Plate: LLAM12206 row. e colonn. 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fissue Produrement: AlCC/DCID/DIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism-"Homo_sapiens"
/db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Robert Stransberg, Ph.D.
Email: cdapbs:remail.nib.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            High quality sequence stop: 647.
Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone-"IMAGE:5528814"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HM453724.1 GT:18502764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.436 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1208.60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 845)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               92.91%
91.04%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10.078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5', mRNA sequence.
HM453724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           £
€
€
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 768 Jefen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Presd. No. :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A CHESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Allegraterat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KENTKEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AHTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ISM45 37.24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LNEWWY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SoftKYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SH, \pi f
                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              â
                                                                                                                                                         Ē
                                                                                                                                                                                                                                                                                                               ÷
                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       \stackrel{\sim}{>}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
```

DS 09 026 459A:47 (1 781) x BM454724 (1-835)

```
BM450031
AGENCOUPT_6494544 NIH_MSC_72 Homo sapiens cDNA clone IMAGE:5528047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryoja, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear EST 05 FEB
                                                                                  128 TGTCCTCTAATCTTCCTCTCCAGAAIAAICACAGAGAGAGAIAIGIAICTIICTCT 187
                                                                                                                                                                                                                                                                         70%
                                                                                                                                                                                                                                                                                                        10.7
                                                                                                                                                                                                                                                                                                                                    543 AsnGluTyrGluLeuMetArqAspArqHisLeuAspGluIleMetMetCysSerMetTyr %62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                603 AspserIleTleValPheTyrAsnSerValPheMetGlnArgLeuLysThrAsnIleLeu 622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   641 rProTyrLys---PheProSerSerProLeu---ArallePro---GlyGlyAsu ---- 6%6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIH-MGC http://mac.nci.nih.qov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                  443 CysProLeuAsnLeuProLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerPro 462
                                                                                                                                                                                                                                                                                                                                                                                                        523 LeuserGlullisProGluLeuGlullisHelleTrpThtLeupherHnHisThtLeuchln 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            428 AATGAGTATGAAGTGATGAGAGAAGGGATTTGGAACGAAATGAGGGGGTGCATGTAT 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            488 GCCATATGCAAAGTGAAGAATATAGACCTTAAATTCAAAATCATTGTAACAGGTTACAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  623 GluTyralaSerThrArqProPro---ThrLeuSerProlleProHisTle ProArqSe 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  668 CAGTATGCTTCCACCAGGCCCCCCTACCTTGTCACCAANTACCTCACATTTCCTCGAAG 727
                                                                 123 PheAspLeuIleLysGlnSerLysAspArqGluGlyProThrAspHisLeuGluSerAla 442
403 LeuGluArqCysGluHisArqIleMetGluSerLeuAlaTrpLeuSerAspSerProLeu 422
                583 AspLeuProHisAlaValGlnGluThrPheLysAraValLeuHleLysGluGluGluTyr
                                                                                                                                                                                                                                                                                                    483 ThreinAlaThrSerAlaPheGinThrCluLysProLeuLysSerThrSerLeuSerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    657 -IleTyrlleSerProLeuLys 663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    788 TATATTTTCAACCCCCTGGAA 809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HM450031.1 GI:18499071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5', mRNA sequence.
BM450031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BM450031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HM450031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                    â
                                                                                                                                                                                                                                  ā
                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                    급
                                                                                                                                                                                                                                                                                                                                                                                                                                        G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ã
                                                                 Ś
                                                                                              g
                                                                                                                                  ò
                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
```

```
/clone_lib=_NTH_MGC_72"
//issuc_typ="med-acodis med-acodis"
//issuc_typ="med-acodis med-acodis"
//dab_bost="DH10B (phage-resistant)"
//corb==norgan skin Vortor prMV Sports. Site_l Bott.
Site_2. Sall; Cloned unidirectionally. Primer Olige dr
Average insert size 2 kb. Library constructed by Lile
Technologies."
                                                                                                          DNA Sequencing by Agricult Phoseience Corporation Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNN. at: http://imaellnl.gov
Plate: LLAM12004 row: d column: 22
High quality sequence stop: 643.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            626. Set thr ArgProProThilleuSet ProffeProHistleProArgSet ProTyrtysPhe 645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         686 ValSerileGlyGluSerPheGlyThrSerGluLySPheGlnLysIleAsnGlnMetVal 705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               706 CysAsuSerAspArgVallentysArgSerAlaGlyGlySerAsnProProLysProLeg 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    726 LycLycLouAraPheAspileGluGlySerAspGluAlaAspGlySerLySHisLeuPro 745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sec HisAlaValdbaldbalbebolgsArqValtocIletysGluGluGluGluGluGluGlocks
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6.2. CATGCTGTTPCAGGAGAGACTTCAAAGGTGTTTTGATCAAAGAAGAGGAGTATGTGTTTT 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           k@k lleValPheTyrAsnSerValPheMe:GlnArgLeuLycThrAsnIleLeuGldTyrAla 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    182 TOOROGARING TARTETATE AND TARTETAN TO THE TOO TO THE TAREA AND TARE 1541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        242 CCIAGI FOACCETTACGGATTFCTFGAGGGAACATCTATATTTCACCCCTGAAGAGTFCCA 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  362 GIATCAATTGGTGAATCATTGGGGACTTGTGAGAAGTTGGAGAAAIAAAIGAGAIGGTA 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   746 G1931uSerLysPhedinGlnLysLeuAlaGluMetThrSerThrArgThrArgMetGln 765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 AAAGTGAAGAATATAGACCTTAAATTCAAAATCATTGTAACAGATACAAGGATCTTCCT 61
                                                               cDNA Library Preparation: Life Technologies, Inc. cINA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1023
216
0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      281 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  indels:
                                                                                                                                                                                                                                                                                        /organism="Homo_sapiens"
/db_aret="taxon.9606"
/clone="IMAGE:5528037"
Contact: Robert Strausberg, Ph.D.
                  Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC/DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-69-626-459A 37 (1-781) x BM450031 (1-1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                Location/Oualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      197 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.38e-109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1111.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      211 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27.668
                                                                                                                                                                                                                                                                        .1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cal Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                yuery Match:
DB:
                                                                                                                                                                                                                                                                        Souther
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HASE CONT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Z
...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>-</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 کر
از
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
```

```
linear EST 27-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Marra.M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptac,M., Fan,F., Underwood,K., Moore,K.,
Theising,R., Wylie,F., Lennon,G., Soares,R., Wilson,R. and
Waterston,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Containing the FTTT3D-Par (Pharmacia) with a modified polylinker; ist strand cDNA was prepared from mammary diad tissue from a lactuing female, and was then primed with a Not 1 - oligo(dT) primer. Double-stranded cDNA was Higated to Eco RI adaptors (Pharmacia), discsted with Not 1 and cloned into the Not I and Eco RI sites of the modified pTTT3 vector. Library is normalized. Library was constructed by Bento Soares and M. Patima Bonaldo. " 178 c 217 q 261 L lothers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Manmalia; Eutheria; Rodentia; Sciuroanathi; Muridae; Murinae; Mus.
1 (bases 1 to 914)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Okanyota, Metarca, Chordata, Chambata, Vertebrata, Esteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                            AA763411

AA763412

AA763412

AA763412

AA763412

AA763412

AA76124758 5' similar to ge missione merrone accordant from the front front from the front from the front front from the front front front from the front front front front from the front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front front
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This clone is available toyalty free through GANL, evaluat the IMAGE Consortium (info@image.llul.gov) for further information.
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
                                                                                                                                              766 LysolnLysMetAsnAspSerMetAspThrSerAspLysGluGluLys 781
                                                                                                                                                                                                                                     602 AANTATAAAATGAATGATAGTATAGTTGAAAGAAGGAAGAAA 649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xtel="taxon.18096"
/clone="IMAGE:1247598"
/clone="Ib="Soares_mammary_qland_NMLMG"
/csec="female (lactating)"
/tissuc_type="mammary gland"
/lab_host="nbH108"
/role=Vactor_FT7P0-Pac_(Phainacia) wi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WashU-HHMI Mouse EST Project
Washington University School of MedicineP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGI:661286
Seq primer: -28ml3 rev2 ET from Amersham
High quality sequence stop: 422.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The WashU-HHMI Mouse EST Project.
Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-026-459A-37 (1-781) x AA763411 (1-914)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein (MOUSE);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA763411.1 GI:2813158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.6e-103
1056.50
82.14%
75.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tel: 314 286 1800
Fax. 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA763411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                         AA763411/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                            COCUS
```

189 PheLeuAspHisAspLysThrLeuGlnThrAspSerileAspSerPheGluThrGlnArg 208

::

```
ALS63757 LIT NELGOT NEC4 HOMO Sapions CHARA CLORE CST 16-FEB-2001
ALS63757 LIT NELGOT NHC4 HOMO Sapions CHARA CLORE CSGROOQQYAQ5 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapters
Eukaryota, Metazoa, "berdata, Craniata, Vertebrata, Euteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HTHTHTH II HTH TOTTER AND THE TOTTER AND THE THITHHHH TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND THE TOTTER AND T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    622 CCAGGCTGTGTGACCATCGGAGTACAGGATATAAACTTTGAGTCCGATGGTATTACGGT 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    209 ThrProArdLysSerAsuLeuAspdledluValAsuVallleProProHisThrProVal 228
                                                                                                                                                                                          856 ACCCACGGAAAACCACCTTGT GAAGCGCCAAACCGGTTACTCCCCCCACCCGGGTT 798
                                                                                                                                                                                                                                                                                                          229 Argibi ValMet Ashibi HedindinkenMet Met HelenAshSer AlaserAspGln 248
                                                                                                                                                                                                                                                                                                                                                                                                     797 TORRETGITTOGAACTTATCAAAAATTATGIGATTITAAACTCGGCGAATGACGGC 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          249 ProSerGluAsnLeurlleSerTyrPheAsnAsnCysThrValAsnProLysGluSerIle 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          269 LeutysAtqValLysAspileClyTyrilePhetysGluLysPheAlaLycAlaValGly 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACGCTGTGG 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               809 ValMetGluSerMetLeulysSerGluCluCluArqLeuSerfloClaAspPhoSerLys 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    124 LeuLeuAsnAspAsnTlePhaHisMetSerLeuLeuAlafysAlaLeuTluValValMet. 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         002 "FOUTAAATGACAACOTTTCAFATGTCTTTACTGGCCTGTGTCTTGAAGTTGTAATG 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49 AlalhilyiSerArqSerlhiSerGlnAsnLeuAspSerGlyThrAspLeuSerPhePro 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               669 TrplleLeuAsnValLeuAsuLeuLysAlaPheAspPheTyrLysValIleGluSerPhe 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         122 ATCANAGIGGANGCCAACTIGACAAGAGAAATGATAAAAACATITAGAAAGATGIGAGCAT 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         109 ArgileMetGluSerLeuAlalrpLeuSerAspSerProLeuPheAspLeufleLysGln 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              429 SerLysAspArdGluGlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuPro 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   449 LeuglnAsnAsnHisThrAlaAlaAspMetTyrLeuserProValArgserProLysLys 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         169 TysGTySerThrThrArgVaTAsnSerThrATaAsnATaGTuThrGTnATaThrSerATa 488
914 TELLOGALOPAGAATAAAPPPTEGGGGGT--LOPTEAGGGGGTTFFFAAAGGGGGAG 857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         145 CTCCAGGGTAACCATACTGGAGGAGTATGTATGTTTCTCCTCCTAAGATCTCCAAAGAAA 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   678 CTAAAGCGGGT AAGGACGTTGGGCACATCCTTAAAGAGAAGTTTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        489 PheGlnThrGlnLySProLeuLyS 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25 TECCATACTCAGAAGGCATTGAAA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ALS63757.1 GI:12913464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   prime, mKNA sequence.
Als63757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   - KIANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ALS6 4757/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>-</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ĩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
```

```
133 GluffisGluCysAsnlleAspGluVallysAsnValTyrPheLysAsnPhelleProPhe 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93 LysThrAlaVall1eProlleAsuGlySerProArqThrProArgArqClyGlnAsnArq 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            153 MctAsmSerLeuGlyLeuValThrSerAsmGlyLeuProGluValGluAsmLeuSerLys 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 193. AsplysThrLeuGliffhrAspSer HeAspSer PheGluthiGlinArqthrFroArdtys - 212.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.91 GATAAAACTCTTCAGAYTGATTCTWTAGACAGTTTTGAAACACAGAGAACACCAGAAAA 4.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  431 AGTAACCTTGWTGGAGAGGTGAATGTAATTCTTCCACACACACTGTAGTTAGGAYTGTTTTG 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    233 AsbirthechnololouMetMetHelenAsbSerAluSerAspGluPreSerGluAsb 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           113 SerAlaArqIleAlaLySGlnLeuGluAsnAspThrArqIleIleGluValLeuCySLyS 132
                                                                                               Genoscope - Centre National de Sequencade
BP 191-91006 EVRY cedex - France
Email: segrel genoscope.cns.fr. Web : www.genoscope.cns.fr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            731 AGTGCACGWTAGCAACACAAYTAGAAATTGATACAAGAATTALTGAAGTTCTCTGTAAA
Mammalia; Euthoria; Primates; Catarthin; Hominidae; Homo.
1 (bases 1 to 792)
                              Li,W.B., Gruber,C., Jessee,J. and Folayes,D.
Full-length cDNA libraries and normalization
Unpublished (2001)
                                                                                                                                                                                                                                                                /tissue_type="neuroblastoma_cells"
/lab_host="DH10H"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                             /clone_lib-"LT1_NFL001_NE4"
/sex-"male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lengt h:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             indels:
                                                                                                                                                                                  /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-026-459A-37 (1-781) x AL563757 (1-792)
                                                                                                                                                                                                /db xref-"taxon:9606"
                                                                                                                                                                                                                Zelone-"CSUDD007YA05"
                                                                                                                                                 Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3.71e-102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1044.00
                                                                               Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          84.538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81.898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25.968
                                                                                                                                                                  792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hest Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                 AUTHORS
               REFERENCE
                                                             JOURNAL
                                                                                                                                                  FEATURES
                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ģ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
```

```
uman.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       328 Lys 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EUL AAA BU3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NOTHER TWILL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BE082846/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHURS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOHENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ę.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        급
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멾
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ġ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   605 bp mRNA Linear EST 14-AUG-2001
ngm bloody Helias saging a clark con-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Berlin/Germany) within the CDNA sequencing consortium of the German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo Sapiens
Eukaryeta: Metazea: Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia: Eulberia: Primetes: Catarthini: Herinidae: Heme.
1 (bases: 1, to 605)
Koehrer, K., Beyer, A., Mewes, W., Weill. B., and Wiendam, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zhota-"Vartor pTriplEx2; Site_1: StifA; Site_2: SfifB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This clode (TRITEPTRIES) is usallable at the REEL in Bellin. Please contact the REEP Ressourcentrum, Heabnerway 5, 14059 Bellin-Charlottenburg, GREMANY; Email: clone@rzpd.de. Localion/Qualillers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clone from S. Wiemann, Molecular Genome Analysis, German Cancer Reseatch Center (DKFZ); Email s.Wiemann@dkfz-heidelberg.de; sequenced by HMFZ (Biomedical Research Center at the Charite,
                                           \texttt{COMM} = \texttt{COMMP} \texttt{COMMP} \texttt{COMMP} \texttt{COMMP} \texttt{COMMP} \texttt{COMP}                                                                                                                                                                                                                                                                                                                                                                                                                   ESI (Kochrer,K., Beyer,A., Mewes,H.W., Weil,B. and Wiemann,S.)
Unpublished (1999)
1/3 LeuileserTyrPheAssAsnCysThrValAssProLysGluSerileLeuLysAraVal 272
                                                                                                                                                                                  174 TysAspileGlyTytilePhotysCluTysPhoAlaLysAlaValGlyCloGlyCysVal 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9.2 erMetLeuLysSerGluGluGluArqLeuSerIleGlnAsnPheSerLysLeuLeuAsn- 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21 ACAAGCVITITICAIAIGIGITITAITIGGGGGGGGGTFGAAGGTFGTAATITGINAIAA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Am Klopterspitz 18a D-82152 Martinsried, Germany
This is the 5' sequence of the clone insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /d-lone_lib="314 (synchym: bloc2)"
/dev slage="adalt"
/lab_host="pH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              179 +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism-"Homo sapiens"
/db_wrof "tawn:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DKFYP 13P092 5', MRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zdb_vrof "tavom-GkO6"
Zolomo-"okogpolomoş"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              106 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No si sequence available.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cDNA-collection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AL599633.1 GI:15162921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.08e - 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1037.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25.82%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Confact: Kochrer K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genome Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62 SerAigser 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hest local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 :: 30AC1AAG1 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A1.5996.13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Persont Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hитап.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MIPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1111EF
JoSERNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSI AN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KFYWIRIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AL599643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N. IWW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T. 240 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.11.2
                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             :--
:--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
```

```
EST 12-30N-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 694)
Dias Noto, E., Garria Portra, F., Verjerski-Aimeida, S., Briones, M.R., Magai, M.A., da Silva, W. Jr., Zaqo, M.A., Bordin, S., Costa, F. F., Goldman, S.H., Carvalho, A.F., Matsukuma, A., Baia, G.S., Simpson, D.H., Brunstein, A., deoliveira, P.S., Bucher, P., Jongeneci, C.V., Pare M.J., Soares, F., Brentani, R.P., Reis, L.F., de Souza, S.J., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fakanyeta, Metanoa, Chordata, Graniata, Vortebrata, Euteleostomi:
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ludwig institute for Cancer Research
Rua Prof Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               129 Clayall curystystystyntischaftschaftschaftskappilikaspolavatyskaplogys 147 [[[[[[[[[]]]]]]]]]
                                                                                                                                                                                                             308 ArgvalMotGluSerMetLeuiysSerGluGluGludrqLouSerFleGludsnPheSer 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541 CGAGTAATGGAATFCATGTTAAATCAGAAGAAGAAGGAITATGCATTCAAAATTTTAGC 600
                                                                                                                                                                                                                                                                                                                                                             121 GAAAATCTTTCTAAACGATACGAAGAAATTTATCTTAAAAATAAAGATCTAGATGCAAGA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         208 ArgThrProArgLysSerAsnLeuAspSluGluValAsnVallleProProHisThrPro 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         228 ValArgThrValMetAsnThrIleGlnGlnLeuMetMetIlcLeuAsnSerAlaSerAsp 247
                                                                                                                   1 GAAGTICICIGIAAAGAACAIGIAAIGIAAIAIASAIGAGGIGAAAAAIGIIIAIIICAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                        188 LeuPhetieuAspHisAspLysThrLeuGlinThrAspSerlleAspSerPheGluihrGlin
                                                                                                                                                                           148 AsnPhelleProPheMetAsnSerLeuGlyLeuValThrSerAsnGlyLeuProGluVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301 GITAGGACTGTTATGAACACTATCCAACAATTAATGATGATTTTAAATTCAAGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                268 IleLeuLysArgValLysAspIleGlyTyrIlePheLysGluLysFheAlaLysAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Natl. Acad. Scl. U.S.A. 97 (7), 3491-3496 (2000)
US-09-026-459A-37 (1-781) x ALS99633 (1-605)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                aboratory of Cammer Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BE082846.1 GI:8473151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Simpson, A.J.
```

```
This sequence was derived from the FAPESPALTCR Ruman Cannor Genema
Project. This order on be seen in the following UKL
Chilps "Www lower behalt or the crip's factoring profession of Richest 2000 of 23.844-1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Znote-"Organ: breast; Vector: puc18; Site_1: Smal; Site_2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Smal: A mini library was made by cloning products derived
from ORESIES PCK (U.S. Letters Patent application No. 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        into the pUC 18 vector. Reverse transcription of tissue mikNA and cDNA amplitication were performed under low stringency conditions. 12 of 2.25 to 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ludwig Institute for Cancer Research) profiles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HELLITELLE HELLETT HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            279 PhotysclutysPhoAlatysAlaValClyClnClyCysValClutteClySerClnArg 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               617 IIIAAAGAAAAAHIIOCIAGAOOOGGACAOGNITGIGGAAATIOGAICACAGGGA 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            299 TyrtysteudlyValArgLesTyrTyrArgValMetGlaSerMetJeutysSerGluGlu 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  419 CluArqLouSerlleGlnAshPhcGetLysicuLcuAshAshAlieFhcHisMetSer 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3.9 LeutemAlaCysAlaLeuGluValValMetAlalbriyrSerArqSerfhrSerGlnAsn 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (5) LeuAspSercilyThrAspLeuSerPheProTrpIleLeuAsnValLeuAsnLeuLysAla 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11/ ITTGATTTTTACAAAGTGATCGAAAGTTTTATGAAAGCAGAAAGGGAACTTGACAAGAAA 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                999 MetilelysHisLenGluArqCysGluHisArqlleMetGluSerLeuAlaTrpLeuSer 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      419 AspserProLeuPheAspLeuIl+LysGlnSerLysAspArqGluGlyProThrAspHis 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative;
Mismatches;
Indels;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /Ordanism="Homo sapiens"
/Ab xret="taxon.9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US 09 026 459A 47 (1-781) x BEOB2846 (1-694)
                                                                                                                                                                                                                                                                              Seq primer: puc 18 torward
High quality sequence start: 58
High quality sequence stop: 669.
                                            Email: asimpson thudwig.erg.br
                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db xret="!axon.9606
/clone lib "BT0642"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /dev stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7.71e 101
1040.00
Fax: +55 11 2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96. 13%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14.458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25.648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Juerry Mateh:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HASE CHUNI
                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <del>ئ</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
```

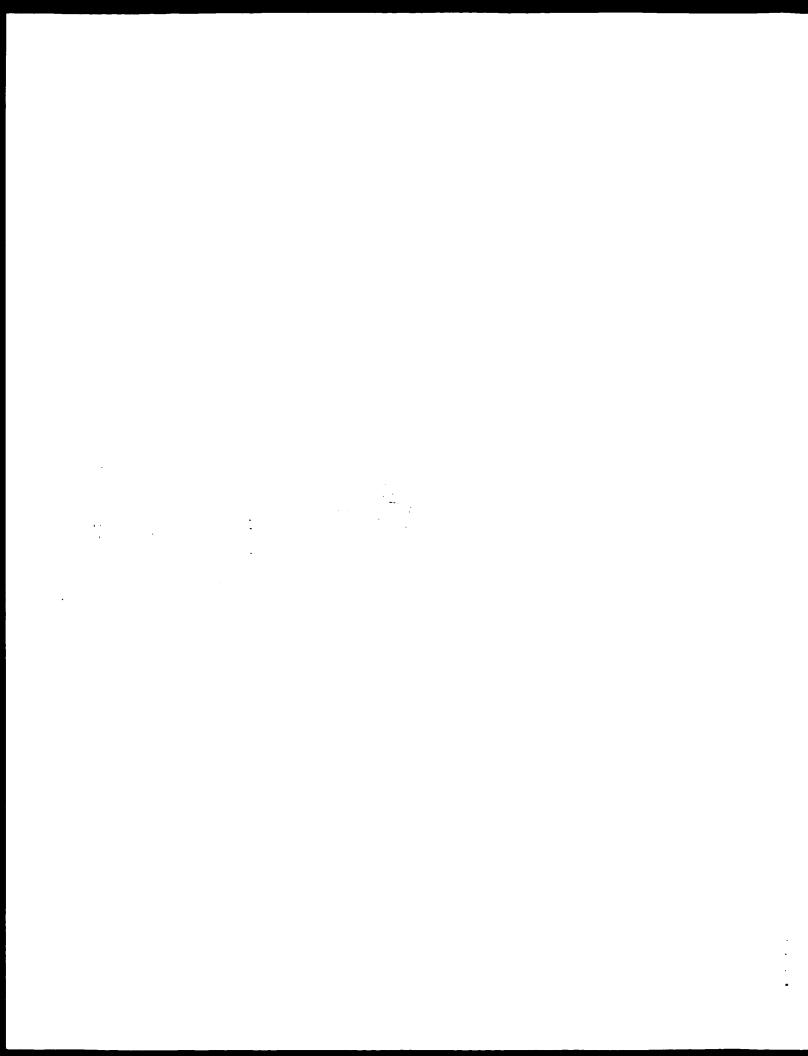
```
(bases 1 to 623)
Melton, D., Mcadows, A., Clifton, S., Hillier, L., Marra, M., Pape, D., Wylie, J., Martha, J., Histain, A., Schmift, A., Herisier, B., Kitter, E., Kenko, L., Hennett, J., Cardenas, M., Gibbons, M., McCann, R., Cite, R., Tsaqareishvili, R., Williams, T., Jackson, Y. and Rowers, Y. Washi-Harvard Pancreas, EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Libratics were constructed by Dr. Douglas Melton
DNA sequencing by: Washington University Genome Sequencing Denter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            For information on obtaining a clone please contact: Juliana Brown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Site_2: Sd 1: Library constructed using Superscript Plasmid Library Kil (Lite Technologies), chNA made by olian dr priming. Size selected by column fractionation: average insert size 1.08 kb, Primary library.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This sequence now available from the HMAGE consortium, for clone orders contact: Info-image. Left-acv
Seq primer: -40RP from Gibro.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge
MA 02138
                                                                                                                                                                                                                                                                           iallh09.yl Human Pancreatic Islets Homo sapiens chwa clone
IMAGE:5638049-5' similar to qb:M15400 RETINOBLASTOMA ASSOCIATED
PROTEIN (HUMAN); qb:M26391 Monso retinoblastoma susceptibility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Organ: Panereas; Vector: psPoRII; Site 1: Not 1;
439 LouGluSerAlaCysProLenAshLeu-FroLeuGlhAshAshBisthrAlaAlaAspMe 458
                          Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
                                                                                                    458 (TyrLeuserProValAraserProLystystystyserThrThrAraVal 47%
                                                                                                                            Harvard University, Howard Hughes Medical Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 officers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib-"Human Pancreatic Islets"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="Islets of Langerhaus"
/dev_stage="Adult"
/lab.host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Consorvative:
                                                                                                                                                                                                                                                         m RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            186 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Smail: dmelton≪biobp.harvard.edu
                                                                                                                                                                                                                                                                                                                                                protein (MOUSE);, mRNA sequence.
AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-026-459A-37 (1 781) x AW583181 (1 623)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      High quality sequence stop: 440.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone-"IMAGE:5638049"
                                                                                                                                                                                                                                                         623 hp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_vrot-"taxon.uk06"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Endocrine Panereas Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualitiets
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (brown@las.harvard.edu)
                                                                                                                                                                                                                                                                                                                                                                                                     AW583181.1 GI:7260125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    unamplitied.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1016.00
98.07%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tel: 617-495-1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fax: 617-495-8557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bost Local Similarity:
                                                                                                                                                                                                                                                   AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
DB:
                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No.:
                                                                                                                                                                                                    RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOHNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                              AW583181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                        VEPSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                   LOCUS
                                               qq
                                                                                                    Ĝ
```

```
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; oy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>G</u>:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA linear EST 27-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  l (bases 1 to 871)
Marra.M., Hillier,L., Allen,M., Bowles,M., Districh N., Dubuque,F. Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Steptce.M., Tan.F., Underwood,K., Moore, H., Theising,B., Wylle,T., Lennon,G., Soares,B., Wilson,R. and Waterston,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus
Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia: Eutheria: Rodentia: Sciurognathi: Muridae; Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  243 nSerAlaSerAspClmProSerGluAsmLeuileSerTyrPheAsmAsmCysThrValAs 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7%54h01.rl Soarcs_mammary_glard_NMLMG Mus musculus chun ricce
IMAGE:1247665 5' similar to gb:M15400 RETINOHLASTOMA-ASSOCIATED
PROTEIN (HUMAN); gb:M2639 M.cusc retinoblastoma susceptibility
protein (MOUSE);, mRNA sequence.
AA76488.1 (E12813232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           263 (SPT) (1921) USANT DEPULYSA (VALL) SAS-TIMO) (1781) EFFECTYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOLULYSOL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7.3 oproHisThrProValArgThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAs 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      663 TICARRANTRATOANCITORRANAAATOTRATITOOTATIAARAAARIGARAAAA 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          283 eAlaLysAlaValGlyGlyGysValGluIleGlySerGlnArqTyrLysLeuGlyVa 303
                                                                                                                                                               144 ValTyrPheLysAsnPheIleProPheMetAsn-SerLeuGlyLeuValThrSerAsnGl 163
                                                                                                                                                                                                                                                                                                                                    (6.) yLeuProdluValdluAsnLeuSerLysArqTyrGluGluIleTyrLeuLysAsnLysAs 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               183 planaspalaargieuPheleuAspHisAsplysThrLeuCinThrAspSerlieAspSe 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        483 TGCTAAAGGTGGGGAAGGGTTGTGGAAATTTGGTCACAGGGATACAAAATTGGTGAAGGT 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4444 Forest Park Parkway, Box 8501, St. Louis. MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Washington University School of MedicineP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1996)
Contact: Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The WashU-HHMI Mouse EST Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    871 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mouseest Awatson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Washu-HHM1 Mouse ESI Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          424 edlaAsaPheSerLysLeu 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FUR ICAAAAIIIIRGGAAACIT 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               314 286 1800
314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA74.3485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               North INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHOANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULI 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A. T. P.S.S. I. 'N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYEORUS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A576.4485,5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSI N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TILLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Z.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
```

```
Another Strong Court of TTTSE Fus. [Flurmacia] with a modified polylinker; ist strand cDNA was prepared from mammary dand tissue from a lactating femble, and was then primed with a Not I - oligo(dT) primer. Double-stranded cinA was ligated to Eco R: adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco R: sites of the modified pTTT3 vector. Library is normalized. Library was constructed by Bento Soares and M: Fating Bonaldo. " a 172 c 204 q 251 t. 2 others
This clone is available royalty free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      209 Christoang/ysSerash - LegaspGloGloValashvallIeP+, Pr.HisPhrityCV 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          228 alArgThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAluserAspG 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     803 TTGG-GOCCTTTTGALACTACTCCACCATIAGGGGGGTTTTTAATTTCCCCCAGTATCA 745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 248 InProSerGluAsnLeulleSerTyrPhcAsnAshCysThrValAshProLysGluSerl 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             744 GOCCALCOSARARICITGOCCICCTICCAIAHIGIGGGGIIAGCIGGAAAGAAGAAL 685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               268 letestysArgVallysAsplleClyTyr:TePhetysClutysPheAlatysAlaValG 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          564 GIGIGAIGANAICCAIGCTIAAATCAGAAGAAGAAGGIIIGIGCGAIICAGAAITTIAGCA 505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 328 ysteuteuAsnAspAsnilePheHisMetSerteuteuAlaCysAlaLeuGluValValM 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         388 hellolysaladladlyashleathrargdlametilelysHisleadlaarg/ysglaH 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  860 AGNICAAGGAAAAAAAANINGGAGGAGGAAAGGAGTTTACCCCCCCCCACAL---CCAG 804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               308 rgValMetGluSerMetLzenzysSerGluGluGluArg.euSerlleGlnAsnPheSert. 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  368 rofrpileicuasnvalieuasnieutysalapheaspphetyrtysvalilediuserp 488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE | FITTELLE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    348 etAlaThrTyrSerArgSerThrSerGlnAsnLeuAspSerGlyThrAspLeuSerPheP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib="Soares_mammary_qland_NMLMG"
/sex="female (lactating)"
/tissuc_type="mammary gland"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative:
Mismatches:
                                                                                                                                                                       Seq primer: -28ml3 rev2 ET trom Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
                                                                                                                                                                                                                                                                                                                                                                                                    /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-026-459A-37 (1-781) x AA763485 (1-871)
                                                                                                                                                                                                                                   High quality sequence stop: 495.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone-"IMAGE:1247665"
                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xret-"taxon:10090"
                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /lab_host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1013.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74.48%
25.22%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80.348
                                                                                                                                                                                                                                                                                                                                                     1. .871
                                                                                                           MGI.661353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          245 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Samalaraty.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ouery Match.
                                                                                                                                                                                                                                                                                                                                                           Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
```

```
Search completed: Japuary 19, 2003, 05:06:10
  US-09-026-459A-47 (1 781) x BG253543 (1 922)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Job time : 1739.9 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90
                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                               ģ
                                                                                                                                                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>q</u>
                                                                                                                                                      5
                                                                                                                                                                                              \ddot{\sigma}
                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EG25.6543 SET 13 FEB 2001
602.664278F1 NIH MGC 90 Homo Sapiens CDNA clone IMAGE:4472611 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
Eukaryota: Metazoa, Chordata, Craniata, Vertebrata: Euteleostoni;
Mammalia; Eutheria; Primates: Catarrhin; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note-"organ: liver, Vector: pCMV'SPORT6; Site_1: NotI: Site_2: Sall: Gloned unidirectionally; oliqo-dT primed. Average insert size 1.7 kb. Library enriched for full-length reforces and constructed by Lite Technologies. Note: this is a NIH_MGC Library."
324 FIATCAAAGTOGGAGTCAAGTTGAGAGAAATGATAAAAGATTTAGAAGGATGTGAGG 265
                                       408 isArqileMetGluSerLouAlaTrpLouSerAspSerProLouPboAspLouIleLysG 428
                                                         448 rolenglinasnasnilisThraliaAlaAspMetTyrLenSerProValArqSerProLysL 468
                                                                                                                                                                                                                                                                        468 ystysolyserThrThrArqValAsaserThrAlaAsaAlaGluThrolaAlaThrSerA 488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution:
                                                                                                                   428 InsertysAspArqdladryProThrAspHistenGlaSerAladysProtenAsateup 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                             147 CHURCAGGIAACCATACTOPAGGAGATATGIATCITTÉTCÉTCIAAGATCTCCAAAGA 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CONA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone lib="Nih_MGC_90"
//issue */pec=adencearcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CONA Library Preparation: Life Technologies, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tound through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
Indeis:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Plate: LLAM10293 row: 1 column: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             197 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 High quality sequence stop: 633.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 922)
NIH MGC bitp://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zdb_xret="taxon.9696"
Zeione="IMAGE:44726]1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: cyapbs-r amail.nih.qov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/gnalitiers
                                                                                                                                                                                                                                                                                                                                                      488 Taithed Inthrethdystrolemiys 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             204 9
                                                                                                                                                                                                                                                                                                                                                                                          27 COTTOCATACTCAGAAGCCATTGAAA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tissue Produrement: AFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RG254544.1 GT.12764459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            State Mol gree
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1504,00
90,518
88,548
24,998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7.930.38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . 14 ·
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               40.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14:25 454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ailgnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            THE MATCHE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NOTATIVITIES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                   PESTILI 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FULKNA1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tool No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                        He3.25 454 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEALURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1111.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MMENI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SHIRCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Z I Z
                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                           Ē
                                                                                                                                                                                                                                                                                                                                                                                          Ē
```

```
1.17
                                                                                                                                                                                                                                                                                              6 4 1
                                                                                                                                                                                                                                                                                                                                                                    631 rLeuSerProlleProHislleProArgSerProTyrLysPheProSerSerProLeuAr 651
                                                                                                                                                                                                                                                                                                                                                                                     651 q1]eProGlyGlyAsnileTyrileSerProLysSerProTyrLys1leSerGlaGl 671
                                                                                                                                                                                                                                                                                                                                                                                                                                                              67] [9].cuProThrProThtLysMetThrProArqSerArqLlet.cuValSerTle61[gilluse | 69]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      711 lLeuLysArqSerAlaGluGlySerAsnProProLysProLeuLysLysLeuArqPheAs 731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 596 TATTGAAGGATGAAGGAAGAAGAAGTAGAAGTAAAGATGCTCCCAGGAGAGAGTCCAATCT 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            656 CAGGCAGAACTGGGGAAATGACTTCTATTCGAAAAAGAATGGCAAAACTGAAATTAAAT 715
551 qHistouAspGIniloMetMetCysSerMetTyrGlyTloCystysValLysAsutTeAs
                                                                                                                                                                                                                                                       611 rValPheMetGInArqLeutysTbrAsnTleLeuGInTyrAlaSerTbrArqProProTh
                                                                                                                                                                                                                                                                                                             731 plledludlySerAspdluAlaAsp-GlySerLysHis-LeuProdlydluSerLysPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          751 SindiniysLeaAladlaMetinrserThrArqThrArqNetClut,sClut,oMetAsu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _
_
_
_
_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                771 AspserMetAspThrSerAsnLysGluGluLys 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    716 GGAAGCIGGGIACCICCACACAGGGAAAGAAA 748
```



Generators version 5.1.3 copyright (c) 1993 -2003 Compugen Ltd.

ona otojona Mo	nucleic scarch, using sw model
Ruth on :	January 16, 2003, 15:20:17 ; Search time 5160.97 Seconds (without alignments) 17554.275 Million cell updates/sec
Lit lo: Perfect score; Sequence;	US-09-026-459A-86. 3113 GCCGLCALCTCAAGACTGTTAAATGACGATTAFTGAFAGT-3113-2
Scoring table:	IDENTITY NOC Sapop 10.0 , Sapext. 1.0
Soar ched:	2054640 seqs, 14553402878 residoes
Foral number of	hits satisfying chosen parameters. 4104280
Minimum DB seq 1	seq tendth; 0 seq tendth; 2000000000
Fost processing:	Minimum Match O% Maximum Match 190% Listing lirst 45 summaries
Litabase :	Observation Description
	# : [4 dd db : 2
	10: qb to:* 11: qb sts:*
	Ę
	20) off off)*
	# #
	25: - din pl:# 25: - on ro:#
	28: em_un:* 29: em_yi:*
	b tal
	81: em htg ing:#
	em, htq. mus:*
	: :
	E E
	: E
	11.1
	40: em_htqo.other:*

is the number of results predicted by chance to have a Prod. No.

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	ĝ	Score	Match	Match Length	DB.	1	leser iption
	-	3107	8.66	4600		HUMRISALRA	aites monument 1864 M
	×	1107	8 55	48 49	Ç	AX + 30701	AX 110701 Sequence
	~	3107	94.8	48 19	5	HUMRHIMRNA	L41870 Homo sapien
	4	3105.4	9.55	42.42	œ	AR072031	ARC72031 Sequence
٥	ıC.	3105.4	8.66	3242	ټ	AR072032	AR072042 Sequence
	œ	1105.4		3242	ۍ	118496	118496 Sequence 1
د	~	3105.4		3242	÷	118497	118497 Sequence 2
	æ	3105.4	9.66	4597	æ	105411	105411 Sequence 1
	5	3105.4		4597	£	109369	Invites Sequence 1
	1:0	1099	9.66	4740	5	HUMRES	M15400 Human retin
		3048.4	97.9	4580	ټ	A01444	Aul444 H.Sapiens D
	~	2415	77.6	2994	ů,	AR091965	AR091965 Sequence
	~ ·	2. 2.	37.6	2994	ت	AE098189	AKCORIBO Sequence
	14	2415	3.77	2994	ن	AR207841	ARZ07841 Sequence
	15	2415	77.6	2994	ن	BE009728	MESSON TISSUE SP
	16	2415	77.6	2994	ç	181465	181465 Sequence 2
	17	2415	77.6	2994	5	HUMKHSA	M28419 Human reti
	18	2410.4		2995	Ţ	AR144747	AR144797 Sequence
	5.7	2110.2		4591	ع	E12560	El2560 cDNA encodi
	20	2108.6	67.7	4591	10		M26391 Mouse retin
	2.1	2098	67.4	44 42	=		D25243 Rattus nore
	22	1401.6	45.0	3456	ŗ		DOULLS GALLUS GALL
	ĩ.	1394	13 18	\$000 1	+		AF2 50742 Camis fam
	7.4	1393.4	44.8	4541	ا ر	GDRET INB	X72218 G.domestic
	ري 1	996.8	0.35	8080 6080	۲.	NVRET I NBP	Yearle N.viridesco
	چ 14	ડ 8 8	25 35 35	2452	ته	109392	TO9392 Sequence 25
	27	⊊ 20 20 20 20 20 20 20 20 20 20 20 20 20	56.8	2352	5	HOMRREL 4	M27866 Buman reti
	œ ~1	ડ જે	26.8	62825	5	AL.136960	ALL 36960 Human DNA
	5 :	3 3 3 3 3 3	26.8	180388	÷.	HUMRET BLAS	Liliato Human retin
) •	/23.4	23.2	2 :	= .	606460	G06460 human STS W
	- ;	8.86.8	4.	2 2 3 3 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	25 L	AFIOZBEI	AF102861 sucorhyne
	7	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	5 L) (<	AYOURDRY OF YELDS
	ń.	483.2	رد. د. د	2012	⊇ .		L9/126 Rattus norv
	# W	2.007 2.000 2.000	r. c	4.00	n a	•	AY125075 Damio rer
	: u	9 7 6	0 0	100	٠.	F 1500 L 152 D	Arstonson Path Trodi
	2 10	0 C	0 t	110188	- :	AC105877	ANTORROW BANK AND AND AND AND AND AND AND AND AND AND
ر	· σ	(X)	7 . 7	205	4 4		NAME OF ANALY OF STREET
. c	5	250.8	7	1698	ت ا	E12561	AB OT ANOTA (357.17)
Ü	4	220.8	7.1	3444	ç	E12564	El 2564 DNA Contain
	4	220.8	7.1	3603	÷	512565	TO CAR WAS CAREED
ີ ບ 	4.2	218.8	7.0	1697	ټ	E09941	E09941 DNA which
	4	207	6.6	480	ۍ.	HUMRBSY79	M19701 Human mutal
	44	199	h.4	120	5	F346015816	AP 446040 Pan (roa)
	4.5	199	6.4	320	1.1	673426	G73426 RB1:17 Rand
						ALIGNMENIS	

	SOURCE Homo sapiens (clone: p4.7R) chNA to mRNA. ORGANISM Homo sapiens	ACLESION MINGAT. JULY14 VERSION MINGAT. JULY 190945 KEYWOKDS retinoblastoma protein.	KESDII 1 HUMRHAIRA 1980S HUMRHAIRA 4600 bp. mRNA DIGGI DEL 1294 DEFINITION HUMAN PELINODIASTOMA ASSOCIATED (RHI) mRNA, complete eds.
--	---	--	---

```
/db_xrel="GI:190946"
| Alb_xrel="App aco | 13% 724"
| Aranslation="MPPKTPRKTAATAAAAAAEPPAPPPPPPPEEDPEQDSGPEDLPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTDLSFPWTLNVLNLKAFDFYKVTESFTKAEGNLTFEWTKHLEPCEHRIMESLAWLSD
SPLFDLIKQSKDREGPTDHLESACPLNLPLQNNHTAADMYLSPVRSPKKKGSTTRVNS
TANAETQATSAFQTQKPLKSTSLSLFYKKVYRLAYLRUTLCERLLSEHPELEHTTWT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VRLEFEFEFEPDRETALONKLK LEDNUVERAML TWEKUSSUNDUT RAYLLIKKKER WALD
LETAAVDLDEMSETETELOKNITELSVHKEENLLIKETDTSTKUDNAMSRLIKKYDVILEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MICYLDYFIKLSFPMLLKEPYKTAVIPINGSPRTPRRGQNRSARIAKQLENDTRITEV
LCKEHECNIDEVKNYYFKNFIPFMNSLGLVTSNGLPEVENLSKPYFEIYLKNYPLDAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SDQPSPNLLSYENNCTVNDKESTLKRVKDTGYLFKEKFARAVOGGTVFTGSGEVKLGV
RLYYKVMESMIKSFEEKLSTQNFSKLLNDNTFHMSLLACALEVVMATYSKSTSQNLDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LFLDHDKTLQTDSIDSFETQRTPRKSNLDEEVNVIPPHTPVRTVMNTIQQLMMILNSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LFQHTLQNEYELMRDRHLDQIMMCSMYGICKVKNIDLKFKIIVTAYKDLPHAVQETFK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RVLIKEEEYDSIIVFYNSVEMQKLKINILQYASTRPPTI,SPIPHIPESPYKFPSSPIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          I PGGN LY LSPILKSPYK LSECLIPTFKMTPRSR TLVS LGEISFGTSEKFOK I NOMVCNSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RVI KRSAEGSNI PRELIKKI RED I EGSDEADASKHI DA ESREGGRI AEMTSTRTEMGRO.
KMNDSMDTSNKEER."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LESKLERTCELTYLTOPSSS1STE1NSALVI.KVSW1TF1LAKGEVI.QMEDDJ.V1SFQI.
                                                                                                                                         Draft entry and computer-readable copy of sequence for [1] kindly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         67 ACATGIGAACITATATATTIGACACAACCCAGCAGITGGAIAICTAGIGAAATAAATICI 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  187 ATGGAAGATGATCTGGTGATTTGATTTGAGTTAATGCTATGTGTCCTTGACTALTTALT 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     247 AAACTCTCACCTCCCATGTTGCTCAAAGAACCATATAAAACAGCTGTTATACCCATTAA1 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              685 AAACTOTCACOTECCATGITGCICAAAGAACECATAIAAAAACAGCIGITAIACCCATTAAI 744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      107 GG1 FPANCTORAAPACCCAAGCCAAGTFAGAAGAGGAGTGCAGGATAGCAAAAGAAGTA 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             467 GAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATATAGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (4) S. ACATGTGAACTTATATATTTGACACAACCCAGCAGTTCGATATCTACTGAAATTCT 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              127 GCATTGGTGGTAAAAGTTTGTTGGATGAGATTTTTATTAGCTAAAGGGGAAGTATTACAA 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SES GCATTGGTGGTAGTTTCTTGGATCATTTTTTATTAGCTAAAGGGAGGAGTATTTAGAA 624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5.25 ATGGAAGATGATCTGGGGGATTTTGATTTTGAGTTAATGCTATGTGTTGTTGTTGTTTGATTTTTATT 684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7 ATGTCANGACTGTTGAAGAAGIATGAAGTATGTTTGCACTCTTCAGCAAATTGGAAAGG 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tumors: Organization of the sequence and its encoded pr
Proc. Natl. Acad. Sci. U.S.A. 84 (24), 9059-9063 (1987)
88097427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 9; Length 4600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /gene="KB1"
/water"relineblastowa associated protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        815 q 1454 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                           provided by S.H.Friend, 10-FEB-1988.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99.8%; Score 3107; 1
100 0%; Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                             /cell_type="retinoblast"
1. .4600
                                                                                                                                                                                                                                                                /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zprotein, id "AAA69806.1"
                                                                                                                                                                                                                                                                                            /db xret-"taxon.9606"
                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                           /map-"13q14.2"
                                                                                                                                                                                                                                                                                                                                                       /clone-"p4.7k"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start
                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                       .4600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1489
                                                                                                                3480530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 3107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QUELY Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LND
                                                                                                                                                                                                                                                                                                                                                                                                                         111111
                                                        I--IJKNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7.
1.
                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>...</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ī
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
```

```
1447 DARAMAMAMAMAMAMMINAGONTONAGAMMAMAMAMMAMAMAMAMAMMAMAMAMAMMINAGII 1506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         985 AATAAAGATGTAGATGCAAGATTATTTTGGATGATGATAAAAGTCITCAGAGTGALIGT 1044
                                                                                                                                                                                                                                                                                                               967 LEARCTAIN AAAAITTTAGGAAACTTCTGAATGACAACATTTTTCATATG1CTTTAIIG 1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1585 TTTIACAAAGTGATCGAAAGTITTATCAAAGGAAGGGAACTTGAGAAGAAATGATA 1644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1207 AAACATTTAGAACGATGIGAACATGGAATCATGGAALGCCTTGCALGGCLCTCAGATTCA 1266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1267 CCTTTATTTGATCTTATAAACAATGAAAGGAGAGAGAAAGGAGAAGGAACTAATTGATGAAGTIGAA 1326
                                                                                                                                                                                                                                                                                                                                                                                                                                  1105 GLAATHOOLGGAGAGAGLGGAGTTAGGAGTGTTATGAACACTATGCAACAALTAALGAIG 1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1345 PERBAGARIOSCTIGIATFACCGAGIAATGGAAICCAIGCTTAAAICAGAAGAAGAACGA 1404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1087 TOTSGAAGASTIGGETITGGGAIGGATIGIGAAIGTGGITAAITTAAAAGGGITIGAI 1146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1825 TOTOGIGIAAGATOTOGAAAGAAAAGILGAAGTAGGGGGGGTGTAAATICTAGTGGAAAT 1884
                      487 PCFAATGGACFTCCAGAGGFTGAAAATCTTTCTAAACGATACGAAGAAATTFAFCTTAAA 546
                                                                                                                                         925 PETRAAPGGACPPCCAGAGGPPGAAAATCPPTAAACGATACGAAGAATTTATCPTAAA 981
                                                                                                                                                                                           547 AATAAAGAFTTAGATGTAAAGTTATITIGGALGATGATAAAACICITCAGACIGATICI 606
                                                                                                                                                                                                                                                                                        607 ATAGACAGTTTTGAAACACAGAGAACACACGAAAAAGTAACCTTGATGAAGAGGTGAAT 666
                                                                                                                                                                                                                                                                                                                                                                                     647 CTAATTEETEEAAATEETAGTAGTTAGGAGTGTTATGAACACTATCCAACAATTAATGATC 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               727 ATTITAAATITAAAGAAGAATAACAATTCAGAAAATCIGATITGGIATTITAACAACIGG 786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        847 CAGAAATTTGCTAAAAGTGGGGACAGGTTTGTGTGGAAATTGGATGAGAGGGALACAAA 906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     427 CTGAAAAATGTTTATTTCAAAAATTTTATACCTTTTATGAATTCTTGGACTTGTAACA 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              787 APAGEGAATCCAAAAGAAACTATACTGAAAAGAGTGAAGGATATAGGATACATCTTTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1027 GCGFGCGFFFFFGAGGTFGFAATGGGGGGGATATAGCAGAAGTACATGICAGAATGIIGAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1765 TCTGCTTGTCCTCTTAATCTTCCTCTCCAGAATAATCACACTGCAGCAGATATGTATCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1387 TOTCOTOTAAGATOTOCOAAAGAAAAAGGTTOAACTACGCGTGTAAATTOTACTGCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ద
                                                                                                                                                                                           ò
                                                                                                                                                                                                                                         占
                                                                                                                                                                                                                                                                                                                                     Ë
                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          £
                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
```

1907 FOR THE TEXT NAMAMERIA TO DE EAR OF TATE TO COCO AND AND THE THE THE TOTAL TO AND AND AND THE THE THE TOTAL TO AND AND AND THE THE THE TOTAL TO AND AND AND AND AND AND AND AND AND AND

```
Linear PAL 09 JAN ZOUZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cancer gene determination and therapeutic sereening using signature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Enkaryota, Metazoa: Chordata; Craniata; Vertebrata; Enteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                         2886
                                                                                                                                                                                                                                                                                                                                                            * 184
                                                               8025 AGTIGIAGCAGALIGITICCTCTCCAAAGTAAAAIIGCTGTGTGTGTTTTAFGGATAGIAAGA 8084
                                               2647 ATGGGCCTAGAGTGGGGGGTCCTGATAACCCAGGCTGTCGTGGATTACTTTGCCTTCTTTTG 2706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3445 TGATACTATCATACTACTGAAACAGATTTCATACCTCAGAATGTAAAAGAACTTACTGAT 3504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7 AIGTCAAGACTGTTGAAGAAGTATGATGTATTGTTTGCACTTTGAGCAAATTGGAAAAG 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Young,F.E., Augustus,M., Carter.K.C., Ebner,R., Endress,G.,
Horrigan,S., Soppet,D.R. and Weaver,Z.
                                                                                                                 2827 CCCATTCACCAAAATTATCTTGAACTCTTGTGCAAAAATGGATATTATTAGAAATTAGAA
                                                                                                                                                                                                                                                                                        3265 CCCATTCACCAAAATTATCCTGAACTCTTCTGCAAAAATGGATATTATTAGAAATTAGAA
                                                                                                                                                                                                                                                                                                                                                                                             2947 GCTTGTTTATAAAATTTTGCTTTTAATTAAAAAAGCTGGAAGCAAAGTATAACATA
                                                                                                                                                                                                                                                                                                                        2887 AAAAATTACTAATTTTACACATTAGATTTTATTTTACACTATGGAAATCTGATATACTGT
                                                                                                                                                                                                                                                                                                                                              8007 IGATACTATCATACTACTGAAACAGALLICATACCTCAGAATGTAAAAGAACTLACTGAL
query Match 99.8%; Score 4107; 148-6; Length 4839;
Hest Local Similarity 100.0%; Pred. No. 0;
Matches 3107; Conservative 0; Mismatches 2
                                                                                                                                                                                                                                                                         8067 IATTTTTTCATCCAACTTATGTTTTAAATGAGGATTATTGATAGT 4114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3505 TALTHULLIHHLIHHLIHHLIHHLIHHLIHHLIHHLIHHLIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NA
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Patent: WO 0194529-A 1210 13 DEC-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1210 from Patent Web194629.
AX 830701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .4839
/organism="Homo saptens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xret="taxon:9606"
c 902 c 880 d l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Avalon Pharmaceuticals (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX330701.1 GI:18103679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1534 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene sets
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX 430701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                         q(1
                                                                               a
                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                  ò
                                                                                                                 à
                                                                                                                                                2
                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                          ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qd
                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ें
```

을 것

Š

Š

2

3 4 5 4 5 4 5 4 5 5

3

 $\frac{2}{3}$

18	2 8	. 30	36	42	4 - 4 1 :	54	60 11	66 12	7.2	78 13	AAA 846 AAA 1418	90	96 15	102 159	108	114	12	TCA 1266
TTATTAGCTAAAGGGGAAGTATTACAA 	CCTTGACTATTTTATT 	PGTTATACCCATTAAI 	GATAGCAAAACAACTA 	ATGTAATATAGAT 	TCTTGGACTTGTA 	AGAAATTTATCTT 	TOTTCAGACTGAT [1][1][1][1]] POTTCAGACTGAT	IGATGAAGAGGTG ITTTTTTTTTTTTTTTTTTTTTTTTT	CCAACAATTAATG 	CTATTTTAACAAC []]]]]]]]] CTATTTAACAAC	AGGATACATCTTT. 	ATCACAGCGATAC 	atgettaaateagaagaacga 	TCATATGTCTTTATTG	ATCTCAGAATCTT 	TTTAAAAGCCTTT 	GACAAGAGAAATG 	TGCATGGCTCTCAGAT
\vdash $ \vdash$	AGTTAATGCTAFGTGTGTT 	IGCTCAAAGAACCATATAAAACAGCTG 	TOGAACACOAGGCAAGGTAAAAAAAGAGGATGAAGGATT FELLELELELELELELELELELELELELELELELELELE	GTAAAGAACATGA 	HATTICAAAAFITTATACCITTTATGAATICTCITGACACTTGTAAC. HEEFILLIIIIHEEFILTIIIHHEEFILTIIIHHEEFILTIIHHHHHH HATTICAAAAATITAAAGCTTAAGAATTCIGTTGGACTGGAAC	CTAAACGATACGA 	ATCATGATAAAAC 	GAAAAGTAACCT 	TOCACACACTCCASTTAGGACTCTTATGACACTATCCAACAATTAATGATG	HAAATTCAGCAAGTGATCAADCHTCAGAAAAHCTGATTHCCTATTTACAACHGC FILLILILILILILILILILILILILIHIHHHHHHHHHH	UCCAAAAGAAGTATACTGAAAQAGTGAAGGATAGGATACATTGAA 	TGCTAAAGCTGTGGGACAGGGTTGTGTGCGAAATTGGATCACAGGGATACAAA 	AATCCATGCTTAA 	FCAAAATTTTAGZAAGTTCTGAATGACAACATTTTCAT. 	CTEGAGGTTGFAATGGCCACATATAGCAGAAGTACATCTCAGAATCTTGAT 	AGATTIGLCTFICCCA IGGATTCTGAATGTGCTTAATTFAAAGCCTTTGAT 	TTA FOAAAGCAGAAGGAACTTGADA 	TGGAATCCCTTGC
TCTTGGATCACATT 	TTCATTTC 	II IGCTCAAAGAAG IIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	76GCCGAGGTCAGA 	ATTGAAGTICTCT 	ZAAAATTTTATAC 	GTTGAAAATCTTT 	AGATTATETTGG 	CAGAGAACACAC 	CCAGITAGRAPTG 	GATCAAGCITCAG 	AGTATAGTGAAAA 	GTGGGACAGGGTT - - - - - - - - - - - - - - - - - -	TACCCACTAATOG - - - - - - - - - - - - - - - - - - -	AGCAAACTTCTGA 	GTAATGGCCACAT GTAATGGGCACAT	THECCAIGGAITIC 	TICGAAGCTTTTATCAAAG TICGAAAGCTTTATCAAAG	AGAACGATGTGAACATCGAATCATGGAATCCT
VITGGIGCTAAAAGTITCITG 	ALGGAAGA LGA FC FGGT GA FF 	ACTOTORCOTOCOATOTE	GGTTCACCTCGAACACC	GAAAA IGA IACAAGAA HATIGAAGTICTCIGIAAAGAACA IGAATGTAATATAGATGAG 	GTGAAAAJGTTFATTF LELLITTTTTTTTTTTT GTGAAAAJGTTTATTT	TOTAAT-GACTTCCAGAGGTGGAAAATCTTCTAAAGGATAGGAAGAAATTTATCTTAAA ELELELLELLELLELLELLELLELLELLELLELLELLEL	AATAAAGA CHAGAAGCAAGATAT EFFEGGAFCAFGATGATAAAAGCECFFGAACTGATGATGT 111111111111111111111111111111	ATAGACAGTTTTTGAAACACACACACACACAAAAGTAACCETGACCETGAAGAGGGGGGGAAT 	GIAAIIGCICCACACACACACACACACACACACACACACA		ACAGTGATGCAAAGAAAAAAAAAAAAAAAAAAAAAAAAA	GAGAAATTTGCTAAAGC 	CTEGRAGHEGGTIGIATTACCARTAATGRAFICE FELLELLITELLITELLITELLITELLITELLITELLITE	CCAL CCAL	199361 	ICTGGAACAGATITGTC LTTTTTTTTTTT ICTGGAACAGTTGTCT	4 – 4	NITI
127 GCA 1+1 699 GCA	187 AIG 111 159 ATG	247 AAACI - - - - - -	407 GGT 111 129 GGT		427 GTG 1-1 1-99 GTG	487 TCI 111 1059 TCI	547 AA1 1119 AAI	r 7		127 ATT: 	787 ACA 111 1459 ACA	847 GAG 111 1419 GAG	907 CII 	967 FIA. 1111 1539 FIA.	1927 GCG7 		r 7	1207 AAACA

 $\hat{\Xi}$

5

Ξ

3

8 8

3

2558 1899 TCTGCTTGTCCTCTTAATCTTCCTCTCCAGAATAATCACACACGCGCGCAGATATGTATCTT 1958 1507 TCACTGTTTTATAAAAAGTGTATCGGCTAGCCTAICTCCGGGCTAAATACACTTGTGAA 1566 1687 ATGTATGGCAIATGCAAAGTGAAGAAIATAGACCIIAAAITCAAAAACALIGIAACAGCA 1745 2259 ATGTATGGGATATGGAAAGTGAAGAATATAGAGGTTTAAATTGAAAATGATTGTAAGAGGA 2318 2439 APPPPGCAGTATGCPPCCAGGGGGGGGGTACCPFGCCAGCAATACCTCACATFCCFCGA 2498 1987 CCCCTGAAGAGTCCATATAAAATTTCAGAAGGTCTGCCAACAACAACAAAAALGAGTGCA 2046 2047 AGATCAAGAATCITAGIATCAATIGGIGAAICAITCGGGACITCTGAGAAGITCCAGAAA 2106 2739 CCTCCTAAAACCACTGAAAAAACTACGCTTTGATACTGAAGGATCAGATGAAGGATGGA 2798 2227 AGTABAMARTET MARANANIMINAAATITMASIASAAAAATIGSIASAAATSAMITMA 2286 1779 AAACAIITAGAAGGAGGGGAAAGAAGAAGGAATGGAATGAATGGAATGGA 1567 CONTINUED CONCREGACION CONTRACA DE LA CONTRACA DEL CONTRACA DE LA CONTRACA DE LA CONTRACA DE LA CONTRACA DE LA CONTRACA DE LA CONTRACA DE LA CONTRACA DE LA CONTRACA DE LA CONTRACA DE LA CONTRACA DE LA CONTRACA DE LA CONTRACA DE LA CONTRACA DE LA CONTRACA DELIGIO DE LA CONTRACA DE LA CONTRACA DE LA CONTRACA DE LA CONTRACA DE LA CONTRACA DE LA CONTRACA DELIGIO DELIGIO DE LA CONTRACA DELIGIO DELIGIO DELIGIO DELIGIO DE LA CONTRACA DELIGIO DE LA CONTRACA DELIGIO DELI 1747 TACAAGGAFCTTCTTCAGTGTTTCAGGAGATTCAAAOGTGTGTTTTGATCAAAGAAGGG 1927 AGCCCTIACAAGIIICCTAGIICACCTIACAGAT[CCTGGAGGGAACA]CIATATILCA 2499 AGCCTIACAAATILCCIAAILCACCTIACGAAAGAAACATCTATATTCA 2167 CCTCCTAAAACACCACTCAAAAAACTACSCTTTGATATTCAAGGATCAGATGAAGGATGAA CCTTTATTTGATCTTATTAAACAATCAAAGGACCGAGAAGGACCAAGTGATCACCTTGAA 1839 CCTTTATTTGATCTTATTAAACAATCAAAGGACCGAGAAAGACCAACTGATCACCTTGAA 2019 GCAGAGACACAAGCAACCTCAGCCTICCAGACCCAGAAGCCATTGAAATCTACTICTT 1867 ATTTECAGIASCLICCAMSAGSCOSSIACTIGICACAIACCICACALTCCICAG 2619 AGATCAAGAATCTTAGTATCAATTGGTGAATCATTGGGGACTTGTGAGAAGTTGCAGAAA 1387 TOTOCHGYANGALCHOUAAAGAAAAAGGIICAACIAOGCGIGIAAAIICIACIGGAAAT TOTCCTGTAAGATCTCCAAAGAAAAAGGTTCAACTACGCGTGTAAATTCTACTGCAAAT 2679 AIAAAICAGAFGIATGIAAGGAGGGACGIGIGGAGAAAAAAGAAGIGCTGAAAGAAGAA TCIGCT1GLCCTCTIAALCITCCTCTCCAGAAIAAICACIGCAGCAGATATGTATCTT 1447 GCAGAGACAGGAACCTCAGCCTTCGAGAGGCAGAGGCATTGAAATGTAGGTCTCTT 2199 CTGCAGAATGAGTATGAAATTAATGAGAGAAATTAGAGCATTTGGAACGAAATTATGATGTGC 2379 GAGTATGATTCTATTAGTATTCTATAGACTCTTCATGATGGAGAGACTGAAAACAAAT 1267 1327 1807 ò Q a g ô g 5 ď ã СP ò q C qq ò qq 9 ò qq ď Ś d d 5 3 5 οy ŝ $\stackrel{>}{\circ}$ ò á ö ; O ô

```
PRI 05-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Structure and partial genomic sequence of the human retinoblastoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens retinoblastoma susceptibility protein (KBI) mRNA and mutations.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryotas Metassas Chesdatas Gramiatas Vertebratas Euteloostomis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2859 PGAACACAAA BIBAAAAAAAAAAAA BAAAAA AGGATGGATACCTGAAAGAAGGAAGAG 2918
                                                                                                                                                                                                                                                                                                                                  2979 CAGALGEGACTGEAACTTFOCCAGGTFCFGFTATGGCCACATTAATALCTTCAGCT 3038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13.19. CPCATTCACCAAAATTATCCTGAACTCTTCTCCAAAAATGGATATTATAGAAATTAGAA 3458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4459 AAAAATTACTAATTTTACACATTAGATTTTATTTACTATTGGAATCTGATATACTGTGT 3518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4519 OUTFGITHTALAAAATTTTGCTTTTAALTAAATAAAAGGGGGAAGGAAAGTATAAGTATAATTAAATTAAATAAAAGGAAAGGAAAGTATAAGGATA 3578
                                                                                                                                                          2527 ATGITACHCATGITATTATAAGAATTGAAAAATCITGIGAAAATCCAAAAAA 2586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3159 AGFTGTAGGAGATEGITTGGTGTTCCAAAGTAAAATTGGTGTGGTTTATGGATAGTAAGA 3218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2642 ALIGGCOTAGAGTGGGAGTCCTGATAACCCAGGCTGTCTGACTTGCTTTGCTTTG 2706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2707 TAGGATATAGGEGATGTTTGGGTGTTTTTTTATTAATTTATATGTATATTTTTAATTT 2765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2767. AACATGAACACCOTTAGAAAATGTGTGTATCTTGCAAATGCAATTGATTGACTG_2826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2467 CITTITGTGGATATAAAATGTGCAGATGCAATTGTTTGGGGTGATTCC1AAGCCACTTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2827 COCATTCACCAAAATTATCCTGAACTCTTCTGCAAAAATGGATATTATTAGAAATTAGAA
                                                                               2.447 AAATGABSATCTCAGBACCTTSGTGGACACTGTGTACACTCTGGATTCATTGTCTCTCA
                                                                                                                                                                                                                                              2407 FAGATGTGACTGTATAACTTTCCCAGGTTCTGTTTATGGCCAGATGTAATGTTCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCIDIA AMADA LICELLOPECE LICONAMINA ANA TROCTOTOCIA PER LICONAMINA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMADA DE AMAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8007 EGATACTATGATACTACTGAAACAGATTTCATACCTCAGAATGTAAAAGAAACTTACTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2887 AAAAATTACTAATTTTACACATTAGATTITAT FFTACTAFFGGAATCTGATATACTGFGF
                                                                                                                                                                                                                                                                                               Mammalia; Entheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                retinoblastoma profein; retinoblastoma susceptibility.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8-89 TATITECTICALCEACHTATATGITTITAAATGAGGAATAATGATAGT 86-89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          806.7 TATITICT FCATCCAACTIATGITTITAAATGAGGATTATTGATAGT 3113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (Sifes)
McGee, I.L., Yandell, D.W. and Dryja, T.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4849 hp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gene 80 (1), 119 128 (1989)
90006771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens con to mena
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    susceptibility dene-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.4 1870.1 G1:79394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HUMRIA I MRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.4.1870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HITMER I MENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NELLINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OFGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KELLEKIN.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PESSILI 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSIEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Soffer
                                                                                                                                                          \tilde{\Xi}
                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \frac{2}{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
```

MEDICINE

```
MICVLDYFTRESPPM LKEPYKTAV POTNISPPTPRPANJESKPETAKOLENOTRITEV
LCKEHECHTDEVKNYYFKNETPFMNSIGLYTSNGLPEVENLSKPYFETYLKNEGLDAR
LFLDHDKTLQTDSTDSFETQRTPRKSNLDEEVNVTPPURTPVRTVANTTGOLAMILINSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIQPSTREESYNNOLVNPRESTERPVECTOR FEREREARANGOTVELGSOBYELLOV
REYYRVMESMEKSEEERESTONFSKELNION FEHISLELATALAVMATYSKSTSONLIDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VKLEFEELTEFFOFTALGVILLTEOHVKEKAMLIWEKVSSVOMVAND TOKKRELMÖDT
TETAAVOLDEMSETETELGKRITETSVHKEENT CRETTESTEVONAMSELLKKYIVILEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Molecular mechanisms of oncogenic mutations is tumors from patients
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /translation-"MPPKTPRKIAATAAAAAEPPAPPPPPPPPEDPEODSGPEDLPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LESKLEPTCELTYLLOPSSSTSTFTNSALVLKVSWTTFLLAKGEVLOMEDDLVTSFUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cowell, J.K. and Kaye, F.J. Britan in a family with incomplete partial inectivation of the RB product in a family with incomplete penetrance of familial refinoblastoma and benian refinal fumors oncogene 9 (5), 1321-1326 (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mechanisms of oncogenesis in pathents with familial retinoblastoms. In Tancer 64 (5), 958-964 (1994). 94041584
                                                                                                                                                                                                                                                                    Oncogenic point mutations in exon 20 of the RM1 gene in families
                                                                                                   polymorphism analysis and polymorase chain reaction sequencing emergence 7 (7), 1445-1451 (1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kratzke, R.A., Otterson, G.A., Hoga, A., Coxon, A.B., Geradis, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product="retimoblastoma_suspectibility_profein"
/profein_id="AAM59465.1"
                                                                                                                                                                                                                                                                                           showing incomplete penetrance and mild expression of the
                                           Hodd, A., Onadim, Z., Baird, P.N. and Cowell, J.K. Detection of heterozygous mutations in the KBI gene in relinoblastoma patients using single strand conformation
                                                                                                                                                                                                                                                                                                               retinoblastoma phenotype
Proc. Natl. Acad. Sci. U.S.A. 89 (15), 6177 6181 (1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    with bilateral and unilateral retinoblastoma
Proc. Natl. Acad. Sci. U.S.A. 90 (15), 7351-735 (1994)
                                                                                                                                                                                                                                          Hodg, A., Baird, P.N. and Cowell, J.K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bia, B., Onadim, Z. and Cowell, J.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mutation data provided by Dr. B.L.Gallie,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xret-"GDB:G00 118-744"
                                                                                                                                                                                                                                                                                                                                                                                                                                         Hodg, A. and Cowell, J.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /ordanism."Homo sapiens"
/db_xret-"taxon:9606"
/map-"14q14.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E-mail: brenda hatiz.eric.on.ca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xret-"G1:793995"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Socation/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene "kBl"
/note="G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hospital for Sick Children
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon_start-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /qene."kB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Toronto ONT W5G 1X8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /marker-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 416 813-5868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FAX: 416 813-4989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          555 Univ. Ave.
                      (sites)
                                                                                                                                                                                                                                                                                                                                                                                                             (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                       Onadim, Z.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (sites)
                                                                                                                                                                                                                      (Siles)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (sites)
                                                                                                                                                                                                                                                                                                                                                             923335261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94203660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hogg, A.,
                                                                                                                                                                                                                                        Onadim, Z
                                                                                                                                                                                            1352398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8217609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8346255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8152792
2701949
                                                                                                                                                                                                                                                                                                                                                                                         1452883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9334827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Canada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
  PUBMED
                         REFERENCE
                                                AUTHORS
                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CXC
                                                                                                                                                                                            PUBMED
                                                                                                                                                                                                                                                                                                                                        JOHNNY,
                                                                                                                                                                                                                                                                                                                                                               MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                         PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDILINE
                                                                                                                                                                   MEDITINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1111E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                       TITLE
                                                                                                                                                                                                                                                                    TITE
```

```
/qene-"RB1"
Thote-"Tumor GOS13 unilateral frameshift mutation
resulting in premature stop; Associated with this mutation
is a large 13g14.3 sub-band deletion; GOU-118-734"
                                      /note-"Tumor GUS563 unilateral mutation causing premature
                                                                                                                                                                                                                                                                                                                                                                                                                          /note="Tumor GOS559 mutation causing premature stop.: GOO-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      427 GEGAAAAUGETTATTICAAAAATTITATACCITITATGAATTCECTTGGACTGTAACA 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     579 AIGICAAGACTGIIGAAGAAGIAIGIAIIGIIIGGAGIGIIGAGGAAAIIGGAAAGG 638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67 ACATCTSAACTTATATATTTGACACCAGGAGGAGTTGGATATCTACTGAAATAA1171 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             127 GTATTGGTGTTAAAAGTITGTTGGALGAGTTTTTTTATTAGGGGAAGTGTAGAA 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        247 AAACTCTCACCTCCCATGTTGCTCAAAGAAGCATATAAAACAGCTGTTATACCCATTAAT +05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   879 GGTTTAFOTTGSAAFAOGFAGGGGAGGTFAGAAGAGGAGTGGAGGGATAGCAAAAGAAGTA 938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              367 GAAAATGATACAAGAATTATTGAAGTTGTCTGTAAAGAAGATGAAIGIAAIAIAAAIGAG 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                939 GAAAATGATACAAATTATTGAAGTTCTCTGTAAAGAACAIGAATGTAATATAGATGAG 998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7 AUGUGAAGAGUGUTGAAGAAGTATGATGTTTGCACTCTTCAGGAATTGGAGG 66
                                                                                                                                                                                                                                 /hote="Tumor GOSIS9 unilateral mutation causing a
promature stop: G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                197 AUGSAACAUSAUGUSGUGATUMGATTUCAGITAALSCUAUSUCUGCUUGAATALITUALU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99.8%; Score 3107; DB 9; Length 4839; 100.0%; Pred. No. C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /not.e-"G00-118-734"
/number=11
                                                                                                                                                                                                                                                                                                                                                  /note="G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene-"RB1"
/note-"G00-118-734"
                                                          stop; G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 100.08; P
Matches 3107; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              /citation=[5]
/replace="t"
                                                                                                                                                                                                                                                                     /citation=[5]
/replace-"t"
                                                                          /citation=[5]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /citation-[5]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /replace-"ca
                    /gene-"RB1"
                                                                                                                  1264
                                                                                                                                                                                                               /qene-"RB1"
                                                                                                                                                                                                                                                                                                             1352
                                                                                                                                                                                                                                                                                                                                                                                                        /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .1469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1400. .1401
                                                                                                                                  /gene⊤"RB1
                                                                                                                                                                                                                                                                                                                            /gene="RB1
                                                                                                                                                                                                                                                                                                                                                                    /number-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /number-13
                                                                                                  /replace
                                                                                                                                                                                                                                                                                                                                                                                          1320
    variation
                                                                                                                                                                                               variation
                                                                                                                                                                                                                                                                                                                                                                                          variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                    CYON
                                                                                                                                                                                                                                                                                                             exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                년
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                  TANAETQATSAFOTQKPLKSTSLSLFYKKVŸRLAYLRLNTLCBRLLSBHPBLEHTIWT
LFQHTTQNPFELMRORHLDOJMGSMYGICKVKNIDLKFKTIVTAYKOLPHRYQETFK
RVLIKBEBEYDSTIVFYNSVENDRLKTHVLLQYASTRPPLLSPIPHIPRSPYKFPSSPLR
POGNITISPHKSPYKTSEGLIJPTPKMTPRSRILVSTGESFOTSREVOKTNOMVCNS)
PVI KBSAFGSNPDROT KKI PFDIJFGSDFANGSKHI PGFSKFOGRI AFMTCKG
                                                                                                                                                                                         Znote-Timor Gosl9 unilateral mutation causing a tentative
word splice; 300-118-734"
Kettation-151
GTDLSFPWTINVINIKAFDFYKVIESFIKAFGNLJREMIKHLERCEHFIMESLAMLSD
SPLFDLIKUSKDEGGPTDHLESACPLNLPLQNNFTAADMYLSPVKSPKKGSTTRVNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /hote-"Tumor GOS561 unilateral trameshift mutation causing premature stop"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="RBL"
/note="Timor Gussaz Eilareral frameshiff mutation causing
premature stop.; G00-118-734"
/cristion is:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note-"RBF64 bilateral familial deletion mutation causing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zhote-"Tumor GOS559 mulalion causing premature stop :
                                                                                                                                                                                                                                                                                                       /note-"G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                    Znot.e-"G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note-"G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /qeue="RB1"
/note="G00 118 734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anote "G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="RB1"
/uote="G00-118 734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Znote "G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Znote "G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note-"G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              premature stop"
/replace="ca"
                                                                                                                                    KMNDSMDTSNKEEK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /replace="ta"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /citation=[5]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /citation=[5]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /replace-"c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /replace-"t"
                                                                                                                                                                                                                                               /replace-"t"
                                                                                                                                                                                                                                                                                                                                                                  /qenc-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1186
                                                                                                                                                                         /gene-"RB1"
                                                                                                                                                                                                                                                                                     /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /dene-"RB!"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /qene-"KB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /qene-"RB1'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /number-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /number-5
                                                                                                                                                                                                                                                                                                                              /number-2
                                                                                                                                                                                                                                                                                                                                                                                                          /number-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /number-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /number-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /number-8
                                                                                                                                                                                                                                                                                                                                                                                                                          .509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /number-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /number-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8.0
                                                                                                                                                      variation
                                                                                                                                                                                                                                                                                                                                                                                                                            variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rariation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              variation
                                                                                                                                                                                                                                                                         CIOXA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COXe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CYCLD
                                                                                                                                                                                                                                                                                                                                                    CXCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PXC1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OXOL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOXA
```

ö

878

us-09-026-459a-36.rge

Page

105 5 4 6	4 5 4	, c c	rg 726 	30 786 11 30 1358	AA 846 	AA 906 A 1478	3A 966 11 3A 1538	rg 1026. Fl FG 1598	AT 1086 AT 1658	AT 1718 11 AT 1718	IA 1206 	TA 1256 	AA 1326 AA 1898	rr 1386 1958	AT 1446 AT 2018	IT 1506 	AA 1566
FOGACTI OTAACA AAI FTAFCFTAAA	AAIITAICIIA ICAGACIGAIT IIIIIIIIIII ICAGACIGAII	TGAAGAGGTGA 	ACANTTANTGA 	HITTAACAACT HITTAACAACT	ATACATCTTTAAA 	ACAGCGALACA 	AGAAGAAGAAC 	TAIGICTTIAI 	TCAGAATCTTG TCAGAATCTTG	AAAAGCCTTTG 	AAGAGAAATGA 	GCTCTCAGAIT 	TGA1CACCTTG 	AGATATGTATC 	TTCTACTGCAA TTCTACTGCAA	AICTACCTCTC 	TACACTTTGTGAA
N ACCITITAT GAATTOTCT TOGACTIOF THOTAAAGA FAGAAGAAAT FIATOT HILLIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHI	GGATACGAAGA GATAAAACTCT TTTTTTTTT GATAAAACTCT	SGAAAAAGTAACCTTGATGAAGAGGTGAAT 6 	AACACTATOCA 	CEGALITECTA 	AAGGATATAGG 	GAAATTGGALC 	ATGCTTAAATC 	AACAITIICA 	AGAAGTACATC 	GTGCTTAATTT 	GGCAACTTGAC 	TCCCTTGCATG 	GAAGGAGGAAG 	CACACTGCAGC	ACGCGTGTAAA 	AAGCCATTGAA 	CTCCGGCTAAAT/
MICHIGIAAA		CACCACGAAAA TITITITITITI CACCACGAAAA	AGACTGTTATG 	TOTT CAGAAAAT TITTITITITI CCTTCAGAAAAT	CTGAAAAGAGTG TTTTTTTTTT		HATGGAATGG HILLELLI STAATGGAATGG	OTTCTGAATGAC 	SCCACATATAGC 	GGATTCTGAAT THILLITH GGGATTCTGAAT	NTCAAAGCAGAA TITTITITITI NTCAAAGCAGAA	GGAATCATGGAA 	CAAAGGAGCGA TITTITITI CCAAAGGAGGG	TCCAGAATAAT 	VAAGGTTCAACT 	HPCAGAGGCAC HTTTHTHTT TCCAGAGGCAG	SEGTATOGGCTAGCTATO FILEFELLERELE SEGFAFOOGTAGCTATO
HTATHCAAAAAN MATATA HCAAAAHAAAAATATI	HCCAGAGG LGAAAA FAGA LGCAAGA LAT HTH LHTH LHTH L FAGA LGCAAGATTAT	VAACACAGAGAA 	VOACTOCAGITA VIVITITITI VOACTOCAGITA	AAGIGAICAAC 	MGAAAGTATAC 	MGCTGTGGGAG 	GTATTAGGGAG TTTTTTGGGAG	ATTTTAGGAAAG - - - - - - - - - - - - - - - - - - -	NGGTTGTAATGC NGGTTGTAATGC	GEGELLGGGAI HELLELLLE GEGETTGGGAI		ATGTGAACATC	FFATTAAACAAT FFFFFFFFFFFFFFFFFFFFFFFFFFF	TTAATCTTGCTC 	TOCANGANA TITETTTTTT TCCANAGANA	JAACTICAGCCI ITTITITITITITI JAACCTCAGCCI	AAAAAAGTGTATC TTTTTTTTTTTTT AAAAAGTGTATG
GIGAAAAAIGIIIV TOTAATGGAGIIG	MARGAC MARGALC MARGALC	AGACAGITI FGI 	67 GTAATTOOTOOACACTOOAGTAAGACTGTTATGAACACTATOCAACAATTAATGAG 720 HILLILLILLILLILLILLILLILLILLILLILLILLILL	THEAAH CAG	AYAHGAATOCAAAAGAAAGTATACTGAAAAGAGTGAAGGATATAGGATACAT FELLELLELLELLELLELLELLELLELLELLELLELLELL	SAAATTTGCTAA FELLLELLELL SAAATTTGCTAA	TOGAGETOGOTE 	AFCCAFTCAAA/ TITTTTTTTT AFCCAFTCAAA/	027 GCGTGCGCTCTGAGGTTGTAATGGCCACAATATAGCAGAAGTACATGGAGAATCTTGAT 108 	TGGAACAGATE TTTTTTTTTT TGGAACAGATE	TTACAAAGTGA: 	ACATTTAGAACG 	TTTAFTTGATC	Torresered FILLEPIELE FORTIGICETE	TCOTGTAAGATO 	POPORORIANI TITTITITI POPORORIANI	ACTGTTTATA
487 10		607 AI 111 1179 AI	667 GT 11 1239 GE	727 AT 11 1299 AT	787 AC 11 1359 AC	847 GA 11 1419 GA	907 CT 11 1479 CT	967 ITI 	1027 GC - 1599 GC	1087 FC 11 1659 FC	1147 TT 	1207 AA E 1779 AA	1267 CC 	1427 Fe	1387 To	1447 GC 11 2019 GC	15.07 F07 [1] (207.9 F02
요 중 :	£ 5 £	5 3	2 3	5 2	5 g	45 10p	5 G	% <u>2</u> 3	5 E	cy Lb	5 =	85 85	55 E	\$ 2 2	5 3	E 2	\$ 4

249H 8678 2286 75.26 7586 186.6 1927 AGCCCTTACAACIT FCCTAGTTCAPCCTTAPGGATTFCTGGGGAAGAAGATFTATATTFCA 1986 1567 GGGCTTC FGLGTGAGGACGCAGAATTAGAACATALCAACTGGACCTTL TLCCAGCACACC 1687 ATGTATGGCATATGCAAAGTGAAGAATATAGACTTAAATTCAAAATCATGTAACAGCA 2259 ATGTATGGCATATGGAAAGTGAAGAATATAGACTTAAATTCAAAAATCATTGTAACAGA 2379 GAGTATGATTCTATAGTATTCTATAACTCGGTCTTCATGCAGAGACTGAAAACAAAT 1867 ATTTGCAGTAGGTTGGAGGGGGGGGGGTATGTGTGAGATAGGTGAGATTGGTGA 2559 COCCTGAAGACTCCATALAAAATTICAGAAGGICTGGCAAGAAGAAAAAAAIGACTCGA 2107 ATAAATCAGATGGTAIGTAACAGCGAGCGTGTGCCAAAAGAAGTGCTGAAGGAAGCAAC 27.39 CCTGCTAAAGGACTGAAAAATFAGGCT11GATATTGAGGATCAGATGAAGATGA 2227 AGTANACATCTCCCAGGAGAGTCCAAATTTCAGGAGAAAACTGCCAGAAATGACTTCTAGT 2799 ACTAAACATCTCCCAGGAGTCCAAATTTCAGGAGAAATTGGTAGAAATGATTTTTAGT 2287 COAACACGAAHGCAAAAGCAGAAAAHGAHGAHAGCAHGAAHACHCAAACAACAACAC 2347 AAATGAGGATCTCAGGACGTTGGGGACACTGTGTACACCTCTGGATTCATTGTCTCA 2407 CAGATGTGACTGTATAACTTTCCCAGGTTCTGTTTATGGCCACATTTAATATCTTCAGCT 2467 CTTTTTGTGGATATAAAA FGTGCAGAFGCAAT LGTTTGGGTGAT LCCTAAGCCACT LGAA 3039 CITITIGEGGATATAAAATGEGGGAATTGTTEGGGGGATTCTTAAGCCACTTGAA 2587 AGTIGIAGCAGATIGITICCICITCCAAAGIAAAATIGCIGIGITITATGGAIAAIAAAA CTGCAGAATGAGTATGAAGTCATGAGAGAGATTTGGAAGTAAAATTATGAGTGTT 1747 TACAAGGATCTTCTTCALGCTGTTCAGGAGACALTCAAAAGTGTTLTGATCAAAGAAGAG 2047 AGATCAAGAATCITAGIATCAATTGGTGAATCATTCGGGACTTCTGAGAAGTTCCAGAAA 2619 AGATCAAGAALCITAGIALCAATTGGTGAALCATTGGGGGGCTTGTGAGAAGITGGAGAAA CCTOCTAAAACCACTGAAAAAACTACGCTT FGATATT SAAGGATMACATGAAGAAAATGA 2527 ATCTTACTCATICTTATTIATACAAGATTGAAAALGTGTGTAAATGCTGTGTAAA 2139 GGCCTTCTGTCTGGASCACCCAGAATAGAACATATCTGGAACACTTTCCAACAAAAAC 5499 1987 2167 a 9 9 qq q q ò qq ò qq õ 9 ó a ò qq ò a Ś q ò ДQ οŽ ŝ 9 Š a \ddot{c} Ś a ò $^{\circ}$ ò

GTGGGAGTCCTGATAACCCAGGCCTGT GTGGGGGCTCTCTGATAACTT TGATGTTTGCTCTGTTTTTATTAATT TGATGTTTGCTCTTGTTTTTTAATT TGATGTTTGCTCTTGTTTTTTTAATT TGATGTTTGCTCTTGTTTTTTTAATT AAATTATCCTGACTCTTCTGCAAAA AATTATCCTGACTCTTCTGCAAAAA AATTATCCTGACTCTTCTGCAAAAA AAATTATCGAATTAGATTTTTTTACT AAATTATCGAATTAGATTTTAATTAATAAAAA AAATTTTACACATTAGATTTTAATTAAAAAA AAAATTTACGAATTAGATTTTAATTAATAAAAA AAAATTTACGAATTAGATTTTAATTAAAAAA AAAATTTACGAATTAGATTTTAATTAAAAAA AAAATTTACGAATTTAAATTAAA	ATGROCCTAGAGTGGAAGTCTT ATGGCCTAGAGTGGGAGTGCT INTELLITITITITITITITITITITITITITITITITITIT
	44 ATGGCCTAGG 229 ATGGCCTAGG 270 TAGCATATGGC 270 TAGCATATGGC 271 TAGCATATGGC 272 AACAGAACAC 273 AACAGAACAC 273 AACAGAACAC 273 AACAGAACAC 274 TAGTTATGGC 274 TAGTTATGGC 275

```
967 ITAICCAIICAAAAIITIAGCAAACIICIGAAIGACAACAIIIITGAIAIAIGICIIIATIG 1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1027 GPGFGPGPTPPFGAGPFGFAALGGPPACATATAGAGTACAAACTACATCFFGAL LÜ86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCTGGAACAGATTTGTTTTTGCATGGATTGTGAATGTGCTTAAAAAGGCTTFGAI 1146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1147 TTTTACAAAGIGATCGAAAGTITTAICAAAGCAGAAGGCAACTIGACAAGAGAGAATGAIA 1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAACATTAGAAGGAIGIGAACAIGGAATCAIGGAAICCCTIGGAIGGCICTCAGATTCA 1266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1267 CCTTTATTTGATCTTATTAAACAATCAAAGGACCGAGAAGGACCAACTGATCACCTTGAA 1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
1384 CTTTATTTGATCTTATTAAAVAALGAAASSACCSAGAAGSACCAACTGATCAACTGAA 1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      904 ACAGTGAATCCAAAAGAAAGTATACTGAAAAGAGTGAAGGATATAGGATACATCITTAAA 953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             906
                                                                                               484 GAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATATAGATGATGAG
                                                                                                                                                                                                                                                              544 GTGAAAAATGTTTGAAAAATTTTATACCTTTTATGAATTCTCTTGGACTTGTAAGA 633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      784 GIAATIGGIGGAGACAGIGGAGIIAGGACIGHAIGAACACTATGGAACAAIAAIGAIG 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   787 ACAGTGAATCCAAAAGAAAGTATACTGAAAAGAGTGAAGGATATAAGATACTTTAAA 846
                                                                                                                                                 367 GAAAATGATAGAAGAATTATTGAAGTTGTGTAAAGAACATGAALGTAATALAGALGAG 426
                                                                                                                                                                                                                            GIGAAAAAIGIIIAIIICAAAAAIIIIAIACCIIIIAIGAAIICICIIGGACIIGIAACA 485
                                                                                                                                                                                                                                                                                                    487 TCTAATGGACTTCCAGAGGTTGAAAATCTTTCTAAACGATACGAAGAAATTTATCTTAAA 546
                                                                                                                                                                                                                                                                                                                                                                             547 AATAAAGATCTAGATGCAAGATTATTTTTGGATCATGATAAAACTCTTCAGACTGATTGT 606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                667 GIAATICCICCACACACICAGIIAGGACIGIIAIGAACACIAITCCAACAALLAAIGAIG 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  844 AITTIAAATIGAGAAGGAAGGAAGTIGAGAAAIGIGALTIGGIALEITAMGAGIGG 903
                                                                         607 ATAGACAGTTTTGAAACACAGAAACACCACGAAAAAGTAACCTTGATGAAGAGTGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTITINAANTTICAGCAAGTGATCAACTTTCAGAAAATCTGATTITICCTATTTTAACAACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           847 GAGAAATTIGCTAAAGCTGTGGGACAGGGTTGTGTGGAAATTGGATCACAGGGAAIAAAA
247 AAACTCTCACCTCCCATGTTGCTCAAAGAACCATATAAAAACAGTGTTATACCATTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   907 GLISSASCHOST INTALANNAM FANDSAANSSA INTELLITIELLE HEELTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1907
                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ā
ò
                                                                                                                                                   ò
                                                                                                                                                                                      a
                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                       Вþ
                                                                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                                                                               â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                         ò
                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                      ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

,							
1386 1503 1446 1563 1506	91 91 91	174 186 180 192	1866 1983 1926 2043	1986 2103 2046 2163	2106 2223 2166 2283	2226 2343 2286 2403	23463 2463 2406 2523 2466
TOTESTIBLE OF TRATETING TO COMBANIANT CAPANGA AND TOTESTIBLE OF THE STATEST OF TH	ICYCTOTTTTATAAAAADTOTATCGGCTAGCCTATCTCCGGCTAAA LITHITHITHITHITHITHITHITHITHITHITHITHITHI	< - <⊢		A BETTE TATANDE LECTANDE AND LEAVED AND SON AND AND ALTHER THE SON AND ALTHER THE SON AND ALTHER THE SON AND ALTHER THE SON AND ALTHER THE SON AND ALTHER THE SON AND ALTHER THE SON AND ALTHER THE SON AND ALTHER THE SON AND AND AND AND AND AND AND AND AND AN		COLOCTAAAO TACAAAAAA TACAA THEALLITTITTITTITTITTITTITTITTITTITTITTITTIT	000 000 000 000 000 000 000
1327 1444 1387 1504 1564 1564	1507 1624 1567 1684 1627 1744	1687 1804 1747 1864	1924 1924 1867 1984			216.7 2284 2227 2344	2287 2404 2347 2464 2407
5 4 5 4 5 4		5 4 5 8	5 2 5 2	5 1 5 1	5 1 5 1	8 8 8 8	5 5 5 5 5 5 5 5 5 5

```
1 (bases 1 to 3232)
Xu,H.J., Hu,S.-X. and Benedict,W.F.
Frod Spectrum transfersion genes gene products and methods for funor suppressor eeue lerrapy Patent: US 5912246 A 2 15 JUN 1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FAL 18 FEB 2000
2524 CAGATGTGACTGTATAACTTTGGGAGGTTGTGTTTTATGGSCACALIAAIAA CI CAGT 2583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             106.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              400¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2644 ATGFTAGFCAFTGTTATTATACAAGATTGAAAATCTTGTGAAATCTGCCATTFAAAA 2703
                                                                                                                                                                                                           2764 AIGGOCCIAGAGIGGAAIGCIGAIAACCCAGGCCIGICIGACIACTITGCCITCIIIG 2823
                                                                                                                                                                                                                                                                                                                            2944 CCCATTCACCAAAATTATCCTGAACTCTTCTGCAAAAATGGATATTATTAGAAAITAGAA 5003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2887 AAAAATTACTAATTITACACAITAGAITTITATTITACTATIGGAATCIGATAIACTGIG 2946
                                                                                                                    2527 ATGTIAGTCATIGITAITIAIACAAGATIGAAAAICTIGIAAAICTTGCAAATTTAAAA 2586
                                                                                                                                                                                      2587 AGTTGTAGCAGATTGTTTCCTCTTCCAAAGTAAAATTGCTGTGTTTATGATAGTAAGA 2646
                                                                                                                                                                                                                                                           2647 ATGCCCTAGACTCCGACTCCTGATAACCCAGACTCTGACTACTTCTTCTTTTTTCTTTG 2706
                                                                                                                                                                                                                                                                                                                                                                                                  2767 AACATGAACACCCTTAGAAAATGTGTCCTATCTATCTTCCAAATGCAATTTGATTGGACTG 2826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3064 GCTTGTTTTATAAAATTTTGCTTTTAATTAAATAAAAGCTGGAAGCAAAGTATAAAATT 3123
                                                 2467 CHTHTTGTGGAFATAAAATG1GCAGATGTTTGTTTGTTGALLCTTAAGCACTTGAA 2526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            osdeto to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2827 CCCATTCACCAAAATTA1CCTGAACTTCTGGAAAAA1GGATALTA1TAAAAAA1AGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3007 TGATACTATCATACTACTGAAACAGATTTCALACCICAGAATGTAAAAGAACLIACTGAT
                                                                                                                                                                                                                                                                             99.88; Score 3105.4; DH 6; Longth 4242; 100.08; Pred, No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8067 IAITTELECALCAACIIATGIIIFIAAAIGAGGAITALEGAIAGT 3113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3184 TATTICTTCALCCAACTTATCTTTTTAAAGGATTATTGATAGT 4230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         71.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="unknown"
/ 566 c 597 q 1986 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AR072632 322 bp.
Sequence 2 from patent US 5912236.
AR072032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AR072032.1 GI:7222920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Oucry Match
Best Local Similarity 100.0%;
Matches 3106; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     983 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AR072032/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         500001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ć
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                   G
G
                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                    ò
                                                                                                                                                     <u>a</u>
                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                             ें
                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                  QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                ŝ
```

			• •	<u> </u>
			,	
66 30 12 29 29 29 29	246 2874 306 2814 366 2754 426 2694	486 2634 546 2574 606 2514	666 2454 726 2394 786 2334 846	2274 906 2214 966 2154 1026 2094 1086 2034
ALG CANARCTELLEGARIAAGEA LEALER TITETTIGEACTTTCACCAATIGGAAAGG ALGELELLE TITLILIH HILLIH HILIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH	ALGGAAGA GARCTGSTGATTICATTICAGTIAATGCAAGGGGGCTGAGCATTATTTTTT ALGTALLIH HILLIH H	GUGAAAATGITTATTICAAAATTITATACCIITTAGAAITCICITGGACIIGITAACA LILLILLILLILLILLILLILLILLILLILLILLILLI	ATAGACAGTITTGAAACAAAAAAAAAAAAAAAAAAAAAAA	ACAGIGAA FOCAAAAGAAAGIATACTIGAAAAGAGTGAAGGATATAGGATACAGTTTTAAA GAGAAAATTIGCIAAAGCTGTGAGAAAGATGAAATTGAAATTGAAATTTGATACAGGATACAAA GAGAAAATTIGCITAAAGCTGTGAGAATGAAATTGAAATTGAGGATACAAA GAGAAATTIGCITAAAGAAAGATAAGAATCCATGCTTAAATCAGGAAAAAAAA
AATTG HIHH AATTG AAATA AAGTA AAGTA AAGTA	ACTAT ACTAT ACTAT TACCO TACCO TACCO CAAAAO CAAAAO ATATAO	GACTTC GACTTC GACTTC TTTATC TTTATC AGACTC	AAGAG AAGAG AATTA AATTA AATTA AATTA AGATCA	ACATC' AGCGA: AGCGA: AGCGA: AGCGA: AGCGA: AGGGA: AGGGA: AGGGA: AGGAAC AGGAAC AGGAAC AGGAAC AGGAAC AGGAAC AGGAAC AGGAAC
CCAGGA 	CCTTG CCTTG CCTTG 	TCTTC AGAAA AGAAA AGAAAA TTCTTC TTCTTC TCTTC TCTTC	TGATG	AGGAT ATCAC ATCAC ATCATA TCATA TCATA ATCTC A
ACTCT3 ACTCT3 ACTCT3 ACTCT3 ACTCT3 ACTCT3 ACTCT3 ACTCT3 ACTCT3	ATGTG1 NTGTG1 NTGTG3 NACAGC AACAGC IIIIII FGCAGC NTIIIIII	SAATTC SAATTC SAATTC ATACGZ TAAAAC FAAAAC		36AFAU HILLIH HILLIHA 111111 36TTA 7ATTT 111111 AAGTAU
	A 1907 P. A 1911 I. A 1911 I. TATANA TATANA A 666665 A 666665 A 666665 A 666665 A 7 1 I. I. I. A A A A A A A A A A A A A A A A A A A	TTTATC 	AAAAAA AAAAG ATGAAG ATGAAC AATCTG AATCTG AATCTG	GTGAAC GTCGAA GTCGAC TCCATC TTTTTTTTTTTT
	AGTTA AGTTA AACCA AGACC HIIII AGACC TOTCT TOTCT		CACGA CTGTT CTGTT CTGTT CAGAA CAGAA	AAAGA GTTGP GTTGP GTTGP TGAAT TGAAT TGAAT TGAAT CATAT
AUGATE HITH VIGATE ACCAC BACCAC BATCA BATCA BATCA	ATTTC TITLL ATTTC CAAAG CAAAG BAGGTC AGTTC AGTTC	ATTTA HILLI AAATC AAATC AATTT	AACCTT ACCTT	ACTICA AC
SAAGIK 	341116 41111 341160 511601 511601 76600 41111 76600	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	CAGAGA CAGAGA CCAGA CCAGA CCAGA CGATCA CGATCA CGATCA CGATCA	AGTA1 AGTA1 AGTA2 AGGA4 AGGAA AGGA
1588. 11111 11113 11111 11111 AAAGT1 AAAGT1	TGGTG 1111 11111 11111 11111 11111 11111 1111	ATTTC THILL VATTEG CAGAG THILL CAGAGA SATGCA	AAAACA 11111 AAAACA 120001 ACAACI 11111 SCAAGI AAAGAA	AAGAA AAGGT AAAGGT FELAT TGTAT ATTTT ATTTT AGGTT AGGTT
ACTTA ACTTA	LIGARG HILLI TICH TICGAZ HILLI TICGAZ TICGAZ TICGAZ TICGAZ	ACTAC ACTAC ACTAC ACTAC	TTTTCAC TCCAC TCCAC TCCAC TCCAC TCCAC TCCAC	1100AP 1100AP 1100AP 1100AP 110AAP 110AAP 110AAP 110AAP 110AAP 110AAP 110AAP 110AAP 110AAP
HCAAG HIIII TCAAG TGTGA HGIGA TTGGT TTGGT	GAAGA GAAGA GACTC CTCTC CTCTC TCACC TCACC TCACC	AAAAA AATGG AATGG AATGG AAAGA	GACAG GACAG ATTCC TTAAA GTGAA	616AA AAAIII AAAIII AAAIII GGAGI 100AI 100AI 100AI
			ATA ATA GTA GTA GTA ATT ATT	644 ACA 644 AC
4114 67 4053 127 127 2944	28.13 28.73 28.73 2.73 36.73 36.73 36.73 36.73	427 2693 487 2663 547 2673	2453 2453 2453 727 727 727 787	2.43.4 2.27.3 2.21.3 2.46.7 2.15.4 11.2.7 2.19.8
\$ 8 8 8 9 8 5	5 8 5 8 5 8 5 8	à f à f 5 f		2

```
1853 CCTTTATTTTGATCTTATTAACAATCAAAGGCCGAGAAGGCCAACTGATCACCTGAA 1794
                                                                                                                                                                                                                                                                   1553 GGCTTCTGTCTGAGCAGAAATAGAACATATCALCTGGGACCTTTLCAGACACACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1147 TTTTACAAAGTGATCGAAAGTTTTATCAAAGGAGAAGGCAAGTTGACAAGAAATGATA 1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1687 AFGTATGGGATATGGAAAGTGAAGAATATAGACCTTAAATTCAAAATCATTGTAACAGCA 1746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u> 1807. GAGTATGATTGTATTATTATTGTATGAGGGTGTTGATGGAGAGGGAAAGAAT 1866</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1867 ATTITGUAGIATATGUATUAN AGGARAN TAGATIGINAN AAIAAN GAGALION 1926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGRICOTTACAAGITTICCTAGITCACCTTAGGGALLECTGGAGGGAAGAFCTATTICA 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2167 CCIGCTAAACCACTGAAAAAATACGCIITGATAFIGAAGGATGACAGAAGAAGAA 2226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2033 TCFCCAACAGATTGFCFTTCFCATGGATGTGCTAATTAAAAGGCTTGGAT
                                                                                1973 TTTTACAAAGTGATCGAAAGTTTTATCAAAGCAGAAGGCAACTTGACAAGAGAAATGATA
                                                                                                                                                1913 AAACATITAGAACGATGIGAACATCGAAICATGGAAISCCIIGCAIGGCICICAGATICA
                                                                                                                                                                                                                                                                                                             1387 TCTCCTGTAAGAICTCCAAAGAAAAGGTTCAACTACGCGTGTAAATTCTACIGCAAAI
                                                                                                                                                                                                                                                                                                                                                                             1447 GCAGAGACAAAGAACCTCAAGCTTCCAGAGGCAGAAGCCATTGAAATGTAGGTGTTGT
                                                                                                                                                                                                                                                                                                                                                                                                             1673 GCAGAGACACAAGCAAPCTGAGPCTFQGAGAPQGAGAGGGAFFGAAATGTAGCTCJGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1627 CTGCAGAATGAGTATGAACTGATGAGAGAGAGGCATTTGGAGGAAATTATGALGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1747 YACAAGGAYCTTTCGTGAYGGTGTTGAGGAGGATTCGAAACGYGTTTYGAYCAAAGAAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1207 AAACATTTAGAACGATGTGAACATCGAALCATGGAALCCTTGCATGCCTTGTTTAGAETCA
                                                                                                                                                                              1267 CCTTTATTTGATCTTATTAAACAATCAAAGGACCGAGAAGGACCAAGTGATCLIGAA
                                                                                                                                                                                                                                                                                                                               1567 CCCCCCCCCCCAGACCCAGAATTAGAACALALCALCIGGACCCTTTTCCAGCACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2047 AGATCAAGAATCTTAGTATCAATTGGTGAATCATTCGGGAACTTCTGAGAAGTTCCAGAAA
                                                                                                                                                                                                                                                1327 TCTGCTTGTCCTCTTAATCTTCCTCTCGAGAATAATCACACTGCAGCAGATATGTATCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 음
                                                                                                                                                                                ολ
                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                             \stackrel{\cap}{\circ}
                                                                                                                                                                                                                                                                                                             \overset{\circ}{\partial}
                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                            ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          òγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     òγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δy
```

```
1007 IGATACTALPATACTACTAGAAAGAGATTIGAFAGGTGAGAATGFAAAAGAAGTTAGTGAT 3066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.47 AAA FGAGGATCTCAGGACCTTGGTGGACAACGTGTACACCTCTGGATTCATTGTCTCTCA 24.05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2407 CAGATGTGACTGTATAACTTTGCCAGGTTCTGTTTATGGCCACATTAATATCTTCAGCT 2466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2467 CLITITIGIGGATATAAAA GIGGAGIGCAA FIGITI GGGTGAFITCI AAGGGAGFIGAA - 2526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2527 AIGITAGICATIGITATIATAAAGAIIGAAAATCIIGIGAAAICGIAGCAIITAAAA 2586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2587 ASTEGTASCASATEGTTFCTCTCTFCCAAAGTAAAATTGCTGTGCTTTATSGATAGTAAGA 2646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26.47 ATGGCCTABATEGGAATGCTGATAACCCAGGCTGTCTGACTACTTGCTTTG 2706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2707 TASCATAFAGITGATGITTGCTCTTGTTTITATTATTATATGIATATTTTTTAATTT 2756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Z827 POPALICACAAAAFTATOOLGAACTOTTOTGGAAAAATGATALTATTAGAAATTAGAA 2886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2887 AAAAATTACTAATTTTACACATTAGATTTTATTTAGTATTGGAATCTGATATACTGTG 2946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2287 PSAASASASAA BISAAAASPAAAAA IGAATISA AGPATIGGATAGGIFAAAGAAGGAAGAG 2346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          65 CITITIGIGGATALAAAA KUTOGAGATGCAATTGTITGGGTGATTGCTAAGCGACTTGAA 594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            533 AGTIGTAGGAGALIGITICOTOTICCAAAGIAAAATIGCTGIGCTIIAIGGATAGTAAGA 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  47 A TORGECTARAGEGRAM PROTESTAND CANACETER CRATECTARIA CONTINUE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TO THE FILE TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          293 COCATTCACCAAAATTATCCTGAACTCTTCTGCAAAAATGGAATTATTAGAAA 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 953 OTTO FAARGACI GAAAAAATACCI I GAIAI I GAAGGA CAGAI GAGAI GAAAGI 894
                                                                                                                                                                                                                                                                                  893 AGTAAACATCTCCCAAGGAGAGTCCAAATTTCAGCAAAAACTGGGAAAATGAGTTCTACT 834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         113 TGATACTATCATACTACTGAAACAGATTTCATACCTCAGAATGTAAAAGAACTTACTGAT 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               406/ TALITICATOATOAACITALGITITIAAATGAGAATAATGATAGT 3113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        53 ALEGERAL CARCACACHER CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTO
                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \stackrel{>}{\supset}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ž
```

```
PERMITS 6.
That so the sequence of from patent US 5496731.
DEFINITION SEQUENCE of Trom patent US 5496731.
ACTESSION THAT SEQUENCE OF TROWS SEQUENCE OF THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND THAT SECOND
```

```
1 (bases 1 to 4232)
Xu.H. J., Hu.S. X. and Benedict,W.F.
Broad spectform tumor suppressor eners, gene products and methods
for tumor suppressor gene therapy
Patent: US 5496741-A 1 05-MAR 1996;
                                                                                                                                                                                                                                                                                                                                                                                        247 AAACTCTCCCATGTTGCTCAAAGAACAIATAAAAAAGAACTGTTATACCATIAAT 506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           $6,6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         424 GOTTICACCTICGAACACCICAGAGGTCAGAACAGGAGTGCACGATAGCAAAAAAAAATA 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   867 GAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAACATGATATAATATAAGATGA 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         484 GAAAATGATACAAGAATTATTGAAGTTGTTGTAAAGAACATGAATGTAATATAGAGAGGGG 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                427 GEGAAAAATGETTAGAAAATEETALACCETTTALGAATTCTCTGGACTTGEAAA 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      544 GTGAAAAATGITTATTTCAAAAATITTATACCTTTTATGAATTCTCTTGGACTTGTAACA 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              487 TCTAATGGACTTCCAGAGGITGAAAATCTTICTAAANGATAGGAAGAAAFITTATATTAAA 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       €99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  607 ATAGAMAGTITITGAAAGAGAGAGAGAGGGAGGAAAAAGIAAMMITGAIGAAGAGGIGAAT 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    724 ATAGAGAGITITIGAAACAGAGAGAGAGAGGAGGAAAAAGTAAACTIGATGAAGAGATGAAT 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        667 GTAATTCCTCCACACACTCCAGTTAGGACTGTTATGAACACTATCCAACAATTAATGT 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         727 ATTITAAATICAGGAAGIGATGAAGCTICAGAAAATGTGATTICCTATTITAACAACTGC 786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               844 ATTTTAAALICAGCAAGTGAAGGTTCAGAAAATGTGALLIGTTALLILAAGAACTGC 903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       787 ACAGTIGAATICCAAAAGAAAGTATACTIGAAAAGAGTIGAAGGATATAGGATACTTTAAA 846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               847 GAGAAATTTGCTAAAGCTGTGGGACAGGGTTGTGTGAAALIGGAFFAAAAAAAA 906
                                                                                                                                                                                                                                                                                                                                                 124 AIGICAAGACIGITGAAGAAGIAIGAIGIIIGIIIGCACICIICAGAAAIIGGAAAGG 183
                                                                                                                                                                                                                                                                                                         7 ATGTCAAGACTGTTGAAGAAGTATGATGTATTGTTTGCA TCTTCAG AAATTGGAAAAGG 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    184 ACATGTGAACTTATATTTGACACAACCAGCAGTTCGATAFCTACTGAAATAAATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            604 PCPAATGGACTFCCACAGGTTGAAAAFCTTTCTAAAGGATACGAAGAAAFTTAAFCTTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               547 ANTANAGATCIAGATGCAAGAITATITITGGATCATGATAAAACICITCAGACTGATTCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             187 ATGGANGATGATGTGGATTTGATTTGAGTTAATGCTATGTGTGTTGATTTTAFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99.88; Score 3105.4; DB 6; Length 3232;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches 1; Indels
                                                                                                                                                                                                                                                  Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualitiers
                                                                                                                                            /organism="unknown"
1 597 c 556 q
                                                                                                                                                                                                                                                Best Local Similarity 100.08;
Matches 3106; Conservative C
                                                                                                                             . 12.12
                                                                                                                                                                 1086 a
                                                                                                                                                                                                                               Query Match
                                                                                                                                                                 BASE COUNT
      REFERENCE
                         AUTHORS
                                                                                     JOHRNAL
                                                                                                          FEATURES
                                              TITLE
                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                             qq
•••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90
                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      БP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \frac{2}{3}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ÖΛ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

. 966 . 1083 . 1026	1143 1086 1203,	1146	. 1206 1323 1266	1326	1386 1503	1446 1563	1506 1623						18	192 204	1986
ASCENTACIONA AAGAAGAACGA BACGAAGAACGA AGTCTTTATTG	HELLILLILLILLILLILLILLILLILLILLILLILLILLI	CCTTTGAT 	AAATGATA 	CAGALTCA ACCTTGAA HILLILL ACCTTGAA	TGTATCTT TGTATCTT	CTGCAAAT 		TTTGTGAA TTTGTGAA	AGCACACC 	10161110 1111111 16161110	TAACAGCA TAACAGCA	ATCAAAGAAGAG 	AAACAAAT AAACAAAT	TICCICGA HIHIII TICCICGA	ATATTTCA
TARANGARGARGARGARGINAAN TARANGARGARGINAAN TARANGARGARGARGARGARGARGARGARGARGARGARGARGARG	TCATALGT TCATALGT ATCTCAGA ATCTCAGA	TTTAAAAG TTAAAAG	GACAAGAG HILLIII GACAAGAG ATGGCTCT	AANGATTTAGAAGGEGEGAAGATGGAATGGAATGCTTGGAGGGEGTGGAGTTT V.4. CCIIIAIITGALCITATTGAAGAAGAAGGAAGAAGAAGACAAGATGAAGATGA V.5. CCIIIAIITGALCITATTGAAGAAGAAGAAGAAGAACAACAAGAAGAAGAAGAAGAAG	AGCAGATA AGCAGATA	AAATTCTA AAATICTA	GAAATCTA ITTTTT GAAATCTA	AAATAGAC aaatagag	CONTINUE COLLITION	AATTATGA AATTATGA	AATCATTG 	TITGATCA IIIIIII TTIGAECA	GAGACTGA 	ACCICACA HILLILL ACCICACA	GAACATET
CCAUGCTTAAA CCAUGCTTAAA CCAUGCTTAAA ACAACATTTTT	AACATTTT ACAAGTAC AGAAGTAC HIHIHI	STGCTTAA 	SGCAACTT LLLLLL CGCAACTT	TCCCTTGC SAAGGACG TITITI	JACACTGC 	ACCCCTCT,	AAGCCALL IIIIIIII AAGCCALL	Teceser THILLI Preceser	ATCTGGAO ATCTGGAO	TTGGACCA 	AAATTCAA HILLILL AAATTCAA	AAACCICT 	PTCATGCA FILLLILL PTGATGCA	FCACCAAL FCACCAAL	00100A00 cTg6A09
PGGAATGCATGCTT FGGAATGCATGCTT FGGAATGCATGCTT FGAATGACAACATT	GAATGACA GAATGACA SATATAGGA TATATAGGA	TCTGAAT HIIIH TCTGAAT	AAGCAGAAA AAGCAGAAA	CATGGAZ CCACCGAC CITTII	AGAATAAT AGAATAATO	STICAACIV TICAACI	AGACCCAGA 	AGCCIAI TITLLI PAGCCIAIN	AACATATO ACATATO	ACAGGCAT. 	AGACCTTA HILLII AGACCTTA	AGACATTC/ 	ACTOGGTO ACTOGGTO	TACCTIG	ACCCATTO TITITI
TACCGAGTAATGGA 		CCATGGAT	TTTATCAZ 	CATCGAA CAATCAAA HHHHHH CAATCAAA	CC1010101	AAAAAAGG	(30011000) 	IAICGGCI HHHHH HAICGCI	CAATTAGA 	ATGAGAGA 	AAGAATAJ - - - - - - - - - - - - - - - - - - -	GTTCAGG GTTCAGGZ	TTCTATA/	AGGCCCC AGGCCCCC	AÇAÇOĞTU TELLITI TOAGOOTI
TICGCTTCTATTACC TICGCTTCTATTACC TICGCTTCTATTACC	ATTTTAGG AGGTTGTA AGGTTGTA AGGTTGTA	TGTCTTTC	TCGAAAGT 	GATGTGAA TIATIAAA HIIIIII	IIAATCIT 	CTCCAAAG 	CAACCICA TITITITI CAACCICA	AAAAAGIG 	AGCACCCA FEFFEE AGCACCCA	ATGAACTC 	GCAAAGTG CCAAAGTG	CTCATGCT 	TTATAGIA 	CTTCCACC 	FICCTAGE FFFFFFFFF TTOCTAGE
KG LEGET FFFFFF KG LEGET ATTEAAA	ATTICANA SCHOOLING THILLING	AACAGATT AACAGATT	AAAGTGA TTTTTT AAAGTGA TTAGAAG	TIAGAAC NIITGAIC	TGICCIC	GIAAGAT	SACACAAG 	TITIAIA 	rigicie FILLI	SAA EGAGT TITTIT	GGCATAT GCCATAT	SCATCITC SCATCITC	GALTCIA	SCAGIAIG FELLILI SCAGIAIG	TACAAGT TTTTTT
CTFGGAGI CTFGGAGI CTFGGAGI	375140 375140 375140 3751411	101007	AAACA	001114	1016C	ICTCC 	GCAGAC CCAGACAC	TCACT		03100.AC	ATGTA1	TACAAC TACAAC	GAGTA1 LTTT- GAGTAE	ATITIC	AGCCC:
10.7 0.24 0.67	184 144	± 4 ;	147 264 207	1324 1267 1384	127	887 504	147	124	567	:27	8 5	36.4	307	384	427

```
2104 CCCCTGAAGACTCCATATAAATTTCAGAAGGTCTGCCAACAACAACAAAAATGACTCCA 2163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2944 CCCATTCACCAAAATTATCCTGAACTCTTCTGCAAAAATGGATATTATAGAAAITAGAA 3003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2527 ATGTTAGTCATTGTTATTATACAAGATTGAAAATCTTGTGTAAATCCTGCCATTTAAAA 2586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2587 AGTIGIAGCAGATIGITICCICTICCAAAGIAAAAITEGIGIGIGIITAIGGATAGIAAGA 2646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2884 AACATGAACATTAGAAAATGTGTCTATCTATCAAAATGGAATTIGATTGACTG 2943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3064 GCTTGTTTTATAAAATTTTGCTTTTAATTAAATAAAAGCTGGAAGCAAAGTATAAACTA 3123
                                                                                2047 AGATCAAGAATCTTAGTATCAATIGGTGAALCALCGGGACITCTGAGAAGITCCAGAAA
                                                                                                                        2164 AGATCAAGAATCTTAGTATCAATTGGTGAATCATTGGGGACTTCTGAGAAGTTCCAGAAA
                                                                                                                                                                 1117 ASTANAMANTOTOTORGGAMANTOTANAMANTOTANGANAMANTOGGAMANAMATOTANGA
                                                                                                                                                                                                                                                                                                                                                                                                                    2404 FGAAGACGAATGCAAAAGFAGAAAATGATATAGATGATGGATAGCTGAAAGAAGGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2347 AAAIGAGGATCIFAAGAAFTIFATGGAACIGISIAAAFCIGIGGAAIGAIGAIGTCTCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2467 CTTTTTGTGGATATAAAATGTGGAATGGAATTGTTTGGGTGALTGGTAGGGGAGTTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2644 AFGTTAGTCATGTTATTTATACAAGATTGAAAATC: IGTGTAAATGCTGCCATTTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2764 ATGGCCCTAGAGTGGGAGTCCTGAIAACCCAGGCCTGICIGACTACTITGCCTICULIIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2767 AACATGAACACCCTTAGAAAATGIGIGCTATCTATCIICCAAATGCAATTIGAIIGACIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2827 CCCATTCACCAAAATTATCCTGAACTCTTCTGCAAAAATGGATALLATLAGAAATTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2887 AAAAATTACTAATTTACACATTAGATTTTATTTACTATTGGAATCTGATACTGTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2947 GCTTGTTTTATAAATTTTGCTTTTAATTAAATAAAAGCTGGAAGCAAAGTATAACATA
1987 CCCCTGAAGAGTCCATATAAAATTTCAGAAGGTCTGCCAACACCAACAAAATJACTCAA
                                                                                                                                                                                                           2167 COTOCTANACOACTGANAAAATAOGTITTOATATTGANGGATGAGATGAAGCAGATGAA
                                                                                                                                                                                                                                                                    2284 CCTCCTARACCACTOARAAAGTAGGCTTIGATATOAAGGATCAGATGAAGGAAGGAAGGAAGGAA
                                                                                                                                                                                                                                                                                                                                                                             2344 AGTAAAFATGTOOONGGAGAGOFOFAAATTIOAGCAGAAAGTGGGAGAAATTGTAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2407 CAGATGTGACTGTATAACTTTCCCAGGTTCTGTTTATGGCCACATITAAIAUCTTCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3007 TGATACTATCATACTACTGAAACAGATTTCATACCTCAGAATGTAAAAGAACTTACTGAT
                                                                                                                                                                                                                                                                                                                                                         , . ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   d
d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                   ò
                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                          ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
```

```
.;
O
                                                                                                                           PAT 07-00T-1998
                                                                                                                                                                                                                                                                                                          Broad spectrum tumor suppressor genes, gene products and methods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     275 F. GAAAA GA FACAAGAA HA HAAAGH CHCHGFAAAGAACA GAAGAATG FAALATAGA GAG - 2694.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           251 8 ATMSACAGITTTGAAACWCASAGAACACGAAAAAAGTAACCTTGATGATGAAGAGGGGAAT 2454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HILLITH HILLITH FILLTH HILLITH HILLITH HILLITH HILLITH HILLITH TILL 2874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2693 GEGAAAAATGITIAFITCAAAAATTITATAGGTTTTATGAATTGTGTGGAGTTGTAACA 2634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2633 ICTAALGGACTIFCGAGAGGTIGAAAATCTITCTAAAGGATAGGAAGAAATTTATGTTAAA 2574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4054 ACALGIGAACILATATATITIGAGAGAAGCAGCAGTICGATATCIACTGAAATAAATICT 2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2813 GOTTO ACCIONA CACACACO CAGO CACACACACACACACACA 2754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67 AMAISIGAACHTATATATHISACAGAAGCAGCAGTHICATATCHACHGAATTGT 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      247 AAACHCHCACCHCCATGH GCHCAAGAACGATAAAAAAGGCCGHALATAGGGATTAAF 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      547 AATAAAGA ECTAGATGEAAAGTTATTATTTTGGATCATGATAAAACTCTTCAGATTGT 606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         127 GOAT GGEGT AAAAGT FETTGGATGAGATTTTAT FAGCTAAAGGGGAAGTATTAGAA 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            467 GAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATAATAAGATGAG 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               487 POLAA BARAH PORAGABIT BAAAAT COLITI CITAAA CAATAA CAAAAA TITAHAAA | 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            607 ATAGACAGITITGAAACACAGAGACACACGAAAAAGGTAAGCTTGATGAAGGGGGGAAT 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7 ATSTCAAGACTGTTGAAGAAGTATGATGTATTGTTTGCACTCTTCAGCAAATTGGAAAGG 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               427 GEGAAAAAGELLALLEGAAAALETALAGGTTETALGAATTCECHGGACTTGTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99.8%; Score 3105.4; DB 6; Length 3232;
806/ INTITITITICATOCANCITATGITITIANATGAGGATTATTGATAGT 3113
                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Indels
                                                                                                                           DNA
DNA
                                                                                                                                                                                                                                                   Unclassified.
[ [bases 1 to 4242]
Xa,H.,J., Hu,S. X. and Benedict,W.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                           for tumor suppressor gene therapy
Patent: HS 5496741 A 2 05:MAR-1996;
                                                                                                                         118497
Sequence 2 from patent US 5496731.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Prod. No.
                                                                                                                                                                                                                                                                                                                                                               Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                  /ordanism-"unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                   547 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                           118497.1 GI:1598852
                                                                                                                                                                                                                                                                                                                                                                                                                   56.6, 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 4106; Conservative
                                                                                                                                                                                                                                                                                                                                                                                  7175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                     984 0
                                                                                                                                                                                                                                      Unknown.
                                                                                                                                                                                                               Unknown.
                                                                                                                                                           118497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ourry Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local
                                                                                                                                        NEEL NIER
                                                                                                                                                                                                                                PRODUISM
                                                                                                                                                                                                                                                                                                                                                                                  Sollios
                                                                                                                                                                                                                                                                                                                                                                                                                   RASE FOUNT
                                                                                                                                                           ACTESSION
                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                            FURNAL
                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                KEYWORDS
                                                                                     RESULT 7
                                                                                                        118497/0
                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                          THIE
                                                                                                                                                                                                                 E. MOES
                                                                                                                                                                                                                                                                                                                                                                                                                                      NICIA
 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
```

```
1614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15.06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1493 CTGCAGAATGAGTATGAAGTCATGAGAGACAGGALLIGGACGAAALIALGATGTGTTCC 1434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1687 ATGTATGGGATATGGAAAGTGAAGAATATAGACCTTAAATTCAAAALCALTGTAACAGA 1746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1207 AAACATTTAGAACGATGTGAACATCGAATCATGAAATOCCTTGAATGGTGTCTCAGATTGA 1266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1853 CCTTTATTIGATCITATIAAACAALCAAAGGACGGAGAAGGACGACGACGAGGACGACGAGGAGAAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1793 TOTGCTIGICOLOTIAATCTIGCTCTCGAGAAIAATCACACIGCAGAGAATATGIT 1734
667 GIAATICCIC ACASACICCAGIIAGGACIGIIALGAA ACIALCAACAATIAATGATG 726
                                                                                                            2393 ATTITAAATTCAGCAAGTGATCAACCTTCAGAAAATCTGATTTCTTTTTTAAAAACTGC
                                                                                                                                                                                        2333 ACAGTGAATCCAAAAGAAAGTATACTGAAAAGAGTGAAGGATATAGGAFACATCTTTAAA
                                                                                                                                                                                                                                                  967 PPATCCAPFCAAAATTTTAGCAAACTTCTGAATGAGAACATTTTTGATATGTGTTTATTG
                                                                                                                                                                                                                                                                                                                                                                                                                    2153 TTATCCATTCAAAATTTTAGCAAACTTCTGAATGACAACATTTTTGATGFGTTATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2033 TCTGGAACAGATTTGTCTTTCCCATGGATTCTGAATGTGCTTAAFTTAAAAGCCTTTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1327 TCTGCTTGTCCTCTTAALCTTGCTCTCCAGAALAALCACACTGCAGCAGATATGTATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1673 GCAGAGACACAAGCAAGCITCCAGACCAGAAGCATIGAAAT TACCITCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1507 TCACTCTTTATAAAAAGTCTATCGGCTAGCCTATCTCCGGCTAAATACACTTTCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1567 GGGCTTGTGTGTGAGGAGGAGAATTAGAAGATATGAFGTGGAGGGTGTTFFG AGGA AGG
                                                                      727 ATTITAAATTCAGCAAGTGATCAACCTTCAGAAAATCTGATITGCTAIIIIAACAACTGC
                                                                                                                                                  787 ACACTGAATOCAAAAGAAAGIATACTGAAAAGAGIGAAGGATATAGATACATGITTAAA
                                                                                                                                                                                                                              847 GAGAAATTTGCIAAAGCIGIGGGACAGGGIIGIGIGAAAIIGGALCACAGCGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1027 GCGTGCCGCTCTTGAGGTTGTAATGGCCACATATAGCAGAAGTACATCTCAGAATCTTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1087 TCTGGAACAGATTGTCTTTCCCCATGGATTCTCAATGTGCTTAATTTAAAACCTTTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1147 TTTTACAAAGTGATGGAAAGTTTTATGAAAGTAGAAGGGAACTGGACAAGAAAAALGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1387 TOTCOTGTAAGATCTCCAAAGAAAAAGGTTCAACIACGGGGGGTAGAAGTACGAAATICTACTGCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1447 GCAGAGACAQAACCTCAGGCTTCCAGAAGCATTGAAATTTACTTCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1553 CCCCTTCTGTCTGACCACCCAGAATTAGACATATCATCTGGACCTTTTTCAGCACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1627 CTGCAGAATGAGTATGAACTCATGAGAGACAGGCATTTGGACCAAATTATGATGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   aa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                          90
                                                                                                                                                                                      G
                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                          ć
                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           òζ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                            ŝ
                                                                                                                                                    ŝ
                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                        â
```

등 골	1.74.7	TACAAGAACTICCTCATGCTGTTCAGAACAITCAAACGTGTTTGATCAAAGAAGG 180 	
5 3	18.17	GAGIAIGAITCIATTATAGIAITCIAIAAGEGGGGTTTCAIGCAGAGAGCAAAT 1866 TULLIILILIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	
5 8	1867	ALEHTGSAGTALGCAGGGGCCCCTAGGTTGTGAGGAFAGGTGAGATTGTGGTGG HEHTELLELLELLELLETTTTTTTTTTTTTTTTTTTTTT	
5 J	1327	AUCCTIACAAGITICCIAGITCACCTIACGGAIICCEGGAGGACALCIATAITITGA 1986 11111111111111111111111111111111111	
§ ±	1347	OPOCIGAAGACHOCATATAAAATTTOAGAAGGGTOTOCCAACAACAAAAAHGACTOCA 2046 FEEFELFILLITITTATATATATAAATTTOAGAAGGGTOTOCCAACAAAAAATAAAAATAAAAATTOAGAAAGGGTOCCAACAAAAAATATAAAAATTTOAGAAAGGGTOGCAACAAAAAAAAAA	
5 £	2:47	AVATCAAVAA POTTAGTATOATTAGTGAATGATTGGGGAGTTGTGAGAAGTTGGAGAAA 2106 1	
3 £	21.07	ATAAATCAGATGTAACAAGGAGGGGGGGGGGGGAAAGAAGAAGGGGGAAGAG	•
b 8	2167	CCICCI AAACCACTGAAAAACTACGCTITTGAAGATTGAAGATCAGATGGAACAGAGAGAGATGGA 2226 FELLI IIII IIII IIII IIIII IIIIIIIIIIIII	
<u>8</u>	2227	AGTAAAFATGTCCCAGGAGAGFCCAAATFTCAGGAGAAACTGGCAGAAATGACTTCTACT 2286 1711 1111	
5 £	2287	CRANTACRAATGNAAAARAAAATGAATGATAGNATGRATANYTYAAAGAAGAAGAG 2346 	
항 중	2147	AAATGACATCTGACATCTTGCDCGATACTGGGGGAAATGCGGATGACTGGGTGCTGACTGGATTATATTTTTATATATA	
5 G	2407	CAGATGLGACTGTATAACHTFCCAGGTTCTGTTTATGGCCACATTTAATATCTTCAGCT 2466 FELLITELLELLELLELLELLELLELLELLELLELLELLELLELL	
:5 Q	5465 653	OTITITATOATATAAAACHIOAGATOAATEITTIGGGTGATTOOTAAGAAOGA 1526 81411111111111111111111111111111111111	
5 G	5.27	AIGHASICAHGHATITALACAARATGAAAATCTEGEAAATCGOGATTEAAAA 2586 FILHFELHELHHIHHHHHHHHHHHHHHHHHHHHHHHHHHH	
5 8	54.47 5.8.3	AGTIGTANGAGATTGTTTGCCCTTGCAAAGTAAAATTGCTGTGTGTTATGGATAGTAAGA 2646 	
\$ B	473	ATOROCTAMITORGATICCTPATAACCGASSCCTGTCTGACTTACTTTGCCTCCTTTGC {	
. 4d	413	FASCATATAGGIGATGTITGCICTIGTITTAATTAATTTATATGTATATTTTTTTAATTT 2766 	
35	7,67,2 55.3	AACATGAATACOOTTAGAAAATOTOTOTATOTATOTTOCAAATGGAATTGATTOTOTTGATOS 2828 TITTITITITITITITITITITITITITITITITITIT	
ŝ	2827	CCCATECACCAAAATTATCCTGAACTCTTCTGCAAAAATGGATATTATTAGAAATTAGAA 2886	

```
PAT 02 DEC 1994
                                                                                                                                       2947 GCTTGTTTTATAAAATTTTGCTTTAAATTAAATAAAAGC1GGAAGCAAAGTATAACCATA 3006
                                                                                                                                                                                                                     3007 TGATACTATCATACTACTGAAACAGATTTCATACCTCAGAATGTAAAAGAACTTACTGAT 3055
                                                          2887 AAAAATTACTAATTTTACACATTAGATTTTTATTACTATTGGAATGTGATALACTGTGT 2946
                                                                                                                                                                             173 GCTTGTTTTTAAAATTTTTGCTTTTAAATAAAAGCTGGAAGCAAAGTTATAACATA 114
293 CCCATTCACCAAAATTATCCTGAACTCTTCTGCAAAAATGGATATTATAGAAAATAGAA 234
                                                                                                  233 AAAAATTACTAATTTTACACATTAGATTTTATTTTACTATTGGAATCTGATATACTGTGT 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C? ACATOTOAACTIAIAIAITISAIACAASOAASIASAIISAIAITAISAAAIAAAAIISI 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FOR ACACTACACTATATATATATACCACCACCACTATICATION (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                127 GGAHTGGTGGTAAAAGTTTGTTGGAFGACATTTTTATTAGGTAAAGGGGAAGTAFTAGAA 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             187 APGGAAGAFGAFGFGGFGAFFFCALFFCACTTAAFGCTAFGTGFCCFFGACFAFFFFAFF 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           622 ATGGAAGARGATGTGGTGATTTCAGTTAATGCTATGTGTCCTTGAGTALLILATL 681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                307 GGTTGACCTGGAACGCCAGGCGAGGGTGAGAACAGGAGTGCAGGGATAGGAAACAACTA 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             467 GAAAATGATACAAGAATTATTGAAGTTCTCTTAAAGAAGATGAATGTAATATAGALGAG 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          427 GIGAAAAAIGITIAITICAAAAATITIAIAGCIITITAIGAAITCTCTIGGACITGTAACA 486
                                                                                                                                                                                                                                                          113 TGATACTATCATACTACTGAAACAGATTTCATACCTCAGAATGTAAAAGAACTTACTGAT 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; daps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7 ATGTCAAGACTGTTGAAGAAGTATGATGTTTGCACTCTTCAGCAAATTGGAAAGG 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  247 AAACTCTCACCTCCCATGTTGCTCAAAGAACCATATAAAACAGCTGTTATACCCATTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99.8%, Store 3105.4, DB 6, Longth 4597;
100.0%; Pred. No. 0:
                                                                                                                                                                                                                                                                                                  3067 PATTTTCTTCATCCAACTTATGTTTTTAAATGAGGATTATTGATAGT 3113
                                                                                                                                                                                                                                                                                                                                                                                                                                            lincar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1; Indels
                                                                                                                                                                                                                                                                                                                       Human HMA in the diagnosis of retinoblastoma
Patent: EP 0259031-A2 1 09-MAR-1988;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1 from Patent EP 0259031.
105311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism-"unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            812 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                39.85,
100.08; Pre
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 4597)
Dryja,T.P. and Friend,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            I05311.1 GI:591083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            842 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 3106; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unclassitied.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1489 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Опклюмп.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL,
                                                                                                                                                                                                                                                                                                                                                                                                RESULT 8
105311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ं
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                돈
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ó
```

Page 15

921	546 981	606 1041	666 1101	726	786 1221	846 1281	906 1341,	966 1401	1026 1461	1086	1146 1581	1206	1266	1326 1761	1386	1446 1881	1506 1941	1566
	467 FOTAA DSEACTECTAGASCITGAAAA FOTTTCIAAACGATACGAAGAATTTATCTTAAA HTTHHHHHHHHHHHHHHHHHHHHHHH	947 AATAAAACETAGATGCAAGATTATTTTGGATGATGATAAAACFCFTCAGACFGATTCT TITTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	607 ATAGACAGITTIGAAACACAGAGAGACGAGAAAAGIAACCITGALGAGAGGGGAAA FELLITTITTITTITTITTITTITTITTITTITTITTITTIT	647 GTAALLOCTG AGACTCCAGITAGGACTGITATGAACACTATCCAACAATTAATGATG FELFEFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	727 AFTELAAALICAGGAAGUGALGAGGAGAAALGUGATEBGGTALUTLAGAAGUGG 	787 ACASTOAATOCAAAADAAGTATACTGAAAAQAGTGAAGGATATAGGATGGGTGAAA TELLELELELELELELELELELELELELELELELELELE	847. GAGAAATTIGETAAAGETGTGGGACAGGGTGTGTGTGCGAAATTGGATCACAGEGATACAAA FELLELETELETELETELETELETELETELETELETELET	907 CTORAGI POCHESIALIAPCOAGIAALGGAAFCAIGHTAAAFAGAAGAAGGA THELLELLELLELLELLELLELLELLELLELLELLELLELL	967 TELECTET CARAATTI ADGAACTI CTGAATGACAACTITTICATATGICTTTATTTG TELECTET CALLEAATTI AGGAACTI CTGAATGAGAACTI TI TELET TI TCATATGI CTTATTI GA	1027 GOTTGOGETCTEGAGGETGTAAFGGCACATATAGAGAGAAGTACACAGAATCTEGAT FELLELLELLELLELLELLELLELLELLELLELLELLELL	1087 PCTGGAAPAGATHGECTTGCCATGGATFCTGAATGTGCTFAALTTAAAAGCCTTGAT 1411141114111411141111111111111111111	1147 EFFTACAAACHCAACGAAACHTTA FCAAAGCAGAAGCAGACHGACHTGAGAAGAGAATGATA EFFTELETTELETTELETTELETTELETTELETTELETT	1207 AAAYATTIAGAAYGADIGAAFATCAAATCATGGAATCCCTTGCATGGATGGCGCAGATTCA TELEFELLELLELLELLELLELLELLELLELLELLELLELL	257 CELLTATEGATCTTATEAANAA CAAABGACGAGAAGGACAACTGATCACTGAA 1111 - 111 - 111 - 111 - 111 -	13.27 PPPOLIGIPOLICITAAIOTICOTCIOPAGAATAATCACACTGCAGCAGATATGTATCTT TELETETETETETETETETETETETETETETETETET	1387 TOTOTOTGTAAGATOTOCAAAGAAAAAAGGTGAACTACGCGTGTAAATTCTACTGCAAAT 	1447 GYAGAGAYAAAPAAYIFAAGETESAAGGAAGGATIGAAATGTACCTGTTT 	1502 TEACGGGTAAAAAAAGGGAAGGGTAGGGGTATGTGGGGTAAATAGAGTTTGTGAA TELLETELETELETTTTTTTTTTTTTTTTTTTTTTTT
=	4 30		9 20	, 52 11 93	cy 7 Db 11	VY 7	4 45		97 s 105 14	9y 11	Cy 10	09 III	4 8	7 3	1 1 4 5 4	1 40 au	07 17 14 18	.1

```
1926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2587 AGTTGTAGGAGATTGTTTCCTCTTCCAAAGTAAAATTGCTGTGGTTTATATGATAGTAAGA 2646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1747 TAGAAGGATCTTCCTCATGCTGTTCAGGAGACATGAAACGTGTTTTGATGAAAAAAGA 1806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2287 CGAACACGAATGCAAAAGCAGAAAATGAALGAAAGAATGGATACCTCAAACAAGAAGAG 2346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2902 CITITIGEGGATATAAATGEGGGGAGATGCAATTGETTGGGTGATFCCFAAGCCACTTGAA 2961
1687 ATGTATGGGATATGGAAAGTGAAGAATATAGGCTTAAATTGAAAATGATATTGTAAGTGTAAGA 1746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1627 CTGCAGAATGAGTATGAACTCATGAGAGACAGCATTTGGACCAAATTALGAFGTEG
                                                                                                                       2062 CTGCAGAATGAGTATGAACTCATGAGAGAATTTGGAACAATTATGAAATTATGATGTTCC
                                                                                                                                                                                                                                     1867 ATTITGCAGIATCCACCAGGCCCCCCIACTIGICACCACCACTACTCCTCACTCCCTCC
                                                                                                                                                                                                                                                                                                                                                                            2302 ATTTTGGAGTALGGTLGGAGGGGGGGGTLGFFGAGAALAGGTGAGAFFFGFGA
                                                                                                                                                                                                                                                                                                                                                                                                           1927 AGCCCTTACAAGTTTCCTAGTTCACCCTTACGATTCCTGGAGGAACATCTATATTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                            2047 AGATCAAGAATCITAGTATCAATTGGTGAATCAITCGGGGACTTCTGAGAAGTTCCAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2167 CCTCCTAAACCACTGAAAAACTACCTTTCATATTCAACGATCACATGAAGTAGATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2602 CCTCCTAAAACCACTGAAAAAACTACGCTTTGATATTGAAGGATCAGATGAAGCAGATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2227 AGTAAACATCTCCCAGGAGAGTCCAAATTTCAGCAAAATCTCGCAAAATGACTTCTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2347 AAATGAGGALCTCAGGACCTTGGTGGACACTGTGACACCTCTGGATTCATTGTCTCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2782 AAATGAGGATCTCAGCCTTGGTGGACACTGTGTACACTCTGGATTCATTGTCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2407 CAGATGTGACTGTATAACTTTCCCAGGTTGTTTATGGCGACACATTAATATGTTCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2467 CTTTTTGGGATATAAAATGTGCAGATGCAATTGTTGGGTGATTCCTAAGGYACTTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2527 AFCPTAGFCAPTGTTATTATACAAGATTGAAAATGTTGAAATGTTGGCATTTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGITAGICATIGITATITATACAAGAITGAAAATCITGIGIAAAATCCIGCCTGCCATITAAAA
                                                                                                                                                                                                                                                                                  1807 GAGTETGATTCTATTATAGLATTCTATAACTGGGTCTTCATGGAGAGAAATAAAT
                                                                                                                                                                                                                                                                                                               2242 GAGTATGATTATATATATTCTATAACICGGTCTTCATGCAGACTGAAAACAAAT
                                                                                                                                                                                                                                                                                                                                                             2107
                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ĠĠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                Ś
                                                            a
                                                                                           Š
                                                                                                                      9
                                                                                                                                                        ô
                                                                                                                                                                                    q
                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        οχ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>a</u>
```

```
PAT 02-DEC-1994
24.4.). ATGROCCTAGAGTGGGAGTPPPRATAAPPPAGGGPFGFGAFGTGAFTAFGTAGFFGFGGPFFGFG
                                      THELLITTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELTTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELlettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellett
                                                                                                                                                                           2767 AAGAIGAAGAGGGTIAGAAAAIGIGICCTATCTATCTACCAAATGCAATTGATTGAGTG 2826
                                                                                                                                                                                                                                                                                                                                                                                                                                                       4202 AACAIGAACACCOTTAGAAAATGTGTCTATCTTATCTICCAAAATGCAATTTGATTG 3261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2827 CCCATTCACCAAAATTATCCTGAACTCTTCTGCAAAATGGATATTATTAGAAATTAGAA 2886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2887 AAAAATTACTAATTITACACATTAGATTTAATTTTACTATTGGAATCTGAIATACTGTGT 2946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2947 GGTTGTTTTATAAAATTTTTGGTTTTAATTAAATAAAAGCTGGAAGCAAAGTATAACCATA 3006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (9)7 IGATACTATCATACIACTGAAACAGATITCAIACCTCAGAATGTAAAAAAACITACTGAT 3066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       32.2 GCCALLCACCAAAATTATCCTGAACTCTTCTGCAAAAATGGATATTATTAGAAATTTAGAA 3321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         67 ACATGTGAACTTATATTTTGACACCCAGCAGTTCGATATCTAGTGAAATTGT 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      187 ALGGAAGATGATCTGGTGATTTCATTTCAGGTAATGCTATGTGTGCTTGACTATTTTATT 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                442 AIGTCAAGACTGTIGAAGAAGTATGATGTATTGTTTGCACTCTTCAGCAAATTGGAAAGG 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       127 GCATTGGTGCTAAAAGTTTCTTGGATCACATTTTTATTAGCTAAAGGGGAAGTATTAGAA 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  622 ATGGAAGATGAGATGAGATGATTAGATTAGAGTAATGCAGTGTCCTTGACTATTAATT 681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  562 GCATIGGIGCTAAAAGTTTC11GGA1CACATTTTTATTAGCTAAAGGGGAAGTATTACAA 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7. ATGLICAAGACTIGT IGAAGAAGTATGATGTATHGTTTTIGCACTCTTCAGCAAATHGGAAAGG | 66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99.8%; Score 3105.4; DB 6; Length 4597; 100.0%; Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5067 TATITICITCALCOACTIAIGITITIAAATGAGGATTAITGAIAGT 3113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4502 TATITICITOATCCAACTIATGTTTTTAAATGAGGATTATTGATAGT 3548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and Yandell, D.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1 from Patent WO 8906703.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
1. .4597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism-"unknown"
841 c 813 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         813 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DIAGNOSIS OF RETINOBLASTOMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent: WO 8906703-A 1 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 4597)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            109369
109369.1 G1:587899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unclassitied.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1489 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      698601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 3106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACIE KS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A CESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   THURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEFFRENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1519469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 91.200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MILEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4:1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŧ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \stackrel{:}{\lesssim}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \leq_{\chi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \dot{5}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ξ
```

```
3207 AAACATTTASAACAAFATSAACATSSAALGATSAALGGGTESCALGGGGGGGAALGA 2266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1402 TIATCCATTCAAAATTTTAGCAAACTTCIGAATGACAACATTTIICATAIGHEITIAIIG 1463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1522 ICTGGAACAGATTTGTCTTTCCCATGGATTCTGAATGTGCTTAATTTAAAAGCTTTGAT 1581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1147 ITITACAAAGFGATFGAAAGTTITATGAAA89A83AA689AAACTTGAGAAGAGAAA1GAIA 1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1642 AAACATTTAGAAGGATGTGAACATCGAATCATGGAATCCCTTGCATGGCTCTCAGATTCA 1701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1267 CCTTTATTTCATCTTATTAAACAATCAAAGGACCGACAAGGACCAACTGATCAGG FWAA 1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1102 GTAATTGCTCCACACTGCAGTTAGGACTGTTATGAACACTATCCAACAATTAATGAIG 1161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1162 ATTTTAAATTCAGCAAGGTGATCAACGTTGAGAAAAIGTGAITTGGTATTTTAACAAGTGG 1221
                                                                                                                                                                                                                                                                                                                                                                                                                                                          HELLITTELLE HELLE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               607 ATAGACAGTITIGAAACACACAGCACGAAAAAGITAACCTIGAIGAAGGGGGAAG 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    667 STANTESCHOSTACIAN ASTINASTINASTINAS AND SANCHARCOACANTINATORIC 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        847 GAGAAATTTGTTAAAGTTGTGGSACAGGGTTGTGTGSAAATTGGATCACAGGGATACAAA 906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           907 CTIGGAGTICGCTTGTATTACCGAGTAATGGAATCCATGCTTAAATCAGAAGAAGAAGA 966
                                                                                              427 GTGAAAAATGTTTATTTCAAAAATTTTATAGGTTTTATGAATTCTCTTGGACTTGTAAGA 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HITTELLE HELLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     487 TCTAATGGACTTCCAGAGGTTGAAAALCTTTCTAAACGATACGAAGAAATTTATCTTAAA 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            922 ICIAAIGGACTECAGAGGITGAAAAICITICIAAAAGGAIACGAAAAAITIAICITAAA 981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            547 ANDAAAGATGTAGAAGGAAGATTATTTGGALGALAAAAGIGTTGAGAMUGATIGT 606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        367 GAAAATGALACAAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATALAGALGAG 426
247 AAACTOTOTOCOATGTGGCTCAAAGAAGGATATAAAAGAGGTGTIAIAGGCAITAAI
                                                                                                                                                                                                                                                                                                                                                                     727 ATTTTAAATTCAGCAAGTGATCAGAAAALCLGALUTCGTATTTTAACAACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   787 ACAGIGAATCCAAAAGAAAGIAITACIGAAAAGAGIGAAGGAIAIAGAAIAIIIAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1087 TCTGGAACAGATTTGTCTTTGCCATGGATTCTGAATGTGCTTAATTTTAAAAGCCTTTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1627 GPGFGPGPTFTFGAGGTTGTAAF9GPGPAIAIABGCAGAAGTACA1CTCAGAAICTTGA1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ٤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ďΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     É.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŏ
```

us-09-026-459a-36.rge

```
linear PRI 12 JUL 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lee,W.H., Bookstein,R., Hong,F., Young,L.J., Shew,J.Y. and Lee,E.Y. Human retinoblastoma susceptibility gene: cloning, identiliteation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 (bases 1 to 480)
Lee,E.Y., Bookstein,R., Young,L.J., Lin,C.J., Rosenfeld,M.G. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2886
                                                                   2647 ATGCCCTAGACTGCAGTCCTGATAACCCAGGCCTGTCTGACTACTTGCCTTCTTTG 2706
                                                                                                                                                                                                                                                                                              4082 ATGGCCCTAGAGTGGGGAGTCCTGATAACCCAGGCCTGTCTGACTTGCTTTGCTTTTTG 4141
                                                                                                                                                                                                                                                                                                                                               4 4 H ]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3007 TGATACTATCATACTACTGAAACAGATTTCATACTCAGAATGTAAAAQAACTTACTGAT 3066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3442 TGATACTATGATACTACTGAAAGAATTCATAGGTCAGAATGTAAAAGAACTTACTGAT +501
              2842 CAGATGTGACTGTATAACITTCCCAGGTTCTGTTTATGGCCACALLIAATA1CTTCAGCT 2901
                                                 2467 CTTTPTGIGGATATAAAAIGIGCAGAFGCAAAFIGIIIGGALGALIATAAGAGAGAA 2526
                                                                                                                                       2527 ATGITAGICATIGITATITATACAAGATTGAAAATCITGIGIAAAATCITGCCATITAAAA
                                                                                                                                                                                        2587 AGTTGTAGCAGATTGTTTCCTCTTCCAAAGTAAAATTGCTGTGTTTATGAATTAGAA
                                                                                                                                                                                                                                                                                                                             2827 CCCATTCACCAAAATTALCCTGAACTTCTTCTGCAAAAATGGALATTATAAAAATTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2887 AAAAATTACTAATTITACACATTAGATTTTATTITACTATTGGAATCTGATATACTGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2947 GCTTGTTTTATAAAATTTTGCTTTTAATTAAATAAAAGCTGGAAGAAAAAATATAAACATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Molecular mechanism of rotinophastoma gene inactivation in
Mammalia; Eutheria; Primates; Catarrhini; Bominidae; Home.
1. (bases 243-to-4740)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           retinoblastoma susceptibility.
Homo sapiens (clone: RB [1,5]) toetus retina cDNA to mRNA.
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Proc. Natl. Acad. Sci. U.S.A. H5 (16), 6017 6021 (1988)
88320373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HUMMAN TELLIDODIASTOMA SUSCEPTIBILITY MENA, COMPLETE CMS. M15400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3067 IATTICTICALCCAACTIATGITIIIAAA1GAGA11A11GA1AGT 3113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Science 235 (4794), 1394-1399 (1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             retinoblastoma cell line Y79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            M15400.1 GI:190958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   87149066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lee, W.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3823889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FITTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HUMRBS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ολ
•••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                  3
                                                                                                                    ŝ
                                                                                                                                                   90
                                                                                                                                                                                          Ś
                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                               ò
```

MEDLINE

```
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qa
·
                                                                                                                                                                                                                                                                                                                                                                             흪
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ολ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ζ
ζ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /translation-"MPPKTPRKTAATAAAAAPPPPPPPPPPPPPEDBEODSGPEDLPL
VRLEFEETEEPDFTALCGKLKIPPHVPFPAWLTWFKVSSVFGVTGKYTGKKELWATO
1FTARVDLDEMSFTLLSYRKTYEISVHKFFNLLKEIDTSTKVDNAMSRLLKKYDVLFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RVIZKSAEGSNIPPKILAKIJKEDIEGSDFADGSKHIJPGESKFOOKIJAEMISTRITKMOKO,
KMNDSMDTSNKEEK"
I 887 C 862 g 1483 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LESKLERTCELLYLLOPSSSISTETNSALVLKVSWITTELLARGEVLOMEDDLVISFOL.
MLCVLDYFTKLSPPMLLKEPYKTAVTPTNGSPRTPRRGONRSARTARQLENDTRTTRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LCKEHEGNIGEVRNYFKNF FPFMNSGGLYISNGLPEVENLSKRYEELTRIKKDEDRR
LFLDHDKTLQTDSIDSFETQRTPRKSNLDEEVNIIPPHTPVRTYWNTIQQLMMILNSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SDOPSENLI SYENNCTVNPKESTIJREVKEJTAYTEKEKFAKAVAGAS VETASQPPKLAV
RLYYRVMESMLKSEEERLSIQNFSKLLNDNIFHIMSLLACALEVVMATYSRSTSGNLDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SPLEDLI KOSKÜREĞITTINLESAÇPI NI PLONNETARDMYL SI-VESPEKKOSTTEVNS
TANAETOATSAEÇTOKPI KSTSLSI EYKKVYPI AYLDI NELOEPLI SEHPELEHJ INT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPGGNIYISPLKSPYKISEGLPTPTKMTPRSPILVSIGESFGTSEKFQKINQMVCNSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTDLSFPWTENVENLKAFDFYKVIESFIKARGNEIREMERHERRGEHRIMESGAWESD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LFQHTLQNEYELMKDKHLDQIMMCSMYGICKVKN1DLKFK11VTAYKDLPHAVQETFK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RVLIKEREYDSTIVTYNSVFMQRLKTNILQYASTRPPTISPIBHIPRSPYKFPSSPLR
3413074 Draft, edity and computeringadable copy of sequence in [1] kindly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SBP ALGEGAAGACTGTGAAGAAGTATGTGTGTTGGACTGTTGGAATTGGAAATGGAAAGG 639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67 ACATGLSAACTTATATATTLGACACCAGCAGCAGTTCGATATCTACTGAAATAAATTCT 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     127 GCATTGGTGCTAAAAGTTTCTTGGATCACATTTTTATTAGCTAAAGGGGAAGTATTACAA 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  200 GCATTGGTGCTAAAAGTTTTCTTGGATCACATTTTTATTAGCTAAAGGGGAAGTATTACAA 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         187 AIGGAAGAIGATCTGGTGATTTCATTTCAGTIAATGCTAIGTGTCGTIGACTAITITATI 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               76: AIGGAAGAIGATOTGGTGATTTOATTTOAGTTAAIGCTAIGTGTGTGACTATTTAIT 819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HITTHEFFER AGENCY OF THE HITTHEFFER AND A SAACT OF TATA TACCOATTATA T 879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             407 OBTITIAR COTOGRAPH COMBROADER AND AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION OF CONTINUACION AND ASSESSION ASSESSION AND ASSESSION AND ASSESSION AND ASSESSION AND ASSESSION AND ASSESSION ASSESSION AND ASSESSION ASSESSION AND ASSESSION ASSESSION ASSESSION ASSESSION AND ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION ASSESSION 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             367 GAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATATAGATGAG 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           247 AAACHCHACCHCCCAHGTHGCHCAAAGAACCATATAAAACAGCTGTTATACCCATTAAT 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 ATGTCAAGACTGTTGAAGAACTATGATGTATTGTTTGCACTCTTCAGCAAATTGGAAAAGG 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1508 a 887 c 862 g 1483 t
1038 bp upstream of EcoPI site: chromosome 13g14.1-g14.2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Znote-"retinoblastomá susceptibility protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99.6%; Score 3099; DB 9; Length 4740;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5; indels
                                                                                      provided by R.Bookstein, 27-APR-1987.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref-"GDB:G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aprotoin id-"AAA69807 1"
                                                                                                                                                                                                                                  /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                          /tissuc_type="retina"
/dev_stage="foetus"
                                                                                                                                                                                                                                                                        /db_xret-"(axon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref-"G1:190959"
                                                                                                                                      Location/Oualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /product-"rbs mRNA"
                                                                                                                                                                                                                                                                                                                                                                    /elone-"KB 11,51"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon_start.-1
                                                                                                                                                                                                                                                                                                                             /map-"13q14.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 188.65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        139. .2925
/qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .4740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 99.89
22. Conservative
                                                                                                                                                                                      4740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .4740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 3102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cherry Match
Best Local S
                                                                                                                                                                                           s \in \mathbb{N}^{C_0}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASII CONI
         PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30
5
                                                                                                                                           FEATURES
                                                    . WWENI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RICIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
```

```
1960 TOTOCHGTAAGATOTOCAAAAAAAAAGGTTOAAGTAGGGGTGTAAAATTGTAGGAAAL 2019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1447 GCAGAGACAACCAACCTCAGCCTTCCAGACCCGAGAGCCATTGAAATCTACCTCTT 1506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2020 GCASAGACACAAACTCAACTTTCAAACCCAAAAGCATGAAATCIACCTATGT 2079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              967 TTATCOATTOAAAATTTTAGGAAAGTTGTGAATGACAACATTTTGATATGTCTTTATTG 1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1087 TCTGGAACAGATTFGTCTTFCCCATGGATTCTGAATGTGCTTAATTTAAAAGCCTTTGAL 1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1660 PCTGGACACATTGGTCTTTCCCATGGATTCTGAATGTGCTTAATTTAAAAGCCTTTGAT 1219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1147 TTTTACAAAGTGATGGAAAGTTTTATCAAAGCAGAAGGCAACTTGACAAGAGAAATGATA 1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1720 TITITACAAAGTGATCGAAAGTITTATGAAAGGAGAAGGAACTTGAGAAAGAAAIGATA 1779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1207 AAACATITABAAMBISTBAAMATPBAATCATBABATOOTTGCATBACTCTCAGATTCA 1266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1267 OCTTTTATTTGATCTTTAAACAATGAAGGAGGAGGAGGAGGACCAACTGATCAGGTTGAA 1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1327 TOTGCTTGTCCTCTTAATCTTCCTCTCCAGAATAALCACACAGCAGCAGALALGTALCLI 1386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1387 TOTECTGTAAAGALOLECAAAGAAAAAGGIFGAAOTAOGOGIGIAAAITETAOLGOAAAT 1446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14.20 GAGAAATTTGCTAAAAGCTGTGGGAGAGGGTTGTGGAATTGGATGAGAGGGGATACAAA 1479
                                                                                                                                                                         487 TCTAATGGACTTCCAGAGGTTGAAAATCTTTCTAAACGATACGAAGAAATTTATCTTAAA 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             667 GFAATTUUTGGACACACACTGGAGTTAGGACTGTATGAACACAATAATGATG 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  727 ATTTTAAATICAGCAAGTGAICAACCITCAGAAAAICTGAITTOCTATTTTAACAAGIGG 786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  787 ACACTICAALICIAAAAGAAGTATACTIGAAAAGAGTIGAAGGATATAGGATACALITAAA 846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    847 GANAAATTISTAAANNTHGRAAANATGTISTGTOGAAAITGGATCACAGGGATAGAAA 906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      907 CEFIGGAGTEGGGTEGTATEAGGGAGTAATGGAATGGATGGTTAAATGAGAAGAAGAAGGA 966
940 GAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAACAIGAATGTAATATAGATGAG 999
                                                       427 GTGAAAAATGTTFATTTGAAAATTTTATAGGTT1FAFGAATFGTGTGGACTTGTAGAAGA 486
                                                                                                                                                                                                                                                                                            547 AATAAAGATCTAGATGCAAGATTATTTTTGGATGATGATAAAAGTGTTGAGATTGATTTTT
                                                                                                                                                                                                                                                                                                                                                                                                        607 ATAGACAGTTTTGAAACACAGAGAACACCACGAAAAAGTAACCTTGATGAAGAGGTAAAT
```

2	1502 T	C.A.C.T.C.T.T.T.T.A.T.A.B.B.B.A.C.T.C.T.A.T.C.C.C.C.T.A.T.C.C.C.C.C.T.A.A.T.A.C.A.C	15.6.6
3 <u>3</u>	7.0807	- PHILITH HILL HILL HILL HILL HILL HILL HIL	2139
S :	7.42	SPOTE GEOFFISH SOCK GARTHAGA AND THE HELL HELL HELLER HELL	1626
	2140 C	GECTIVITET GEORGE ACOCEGNATIAGA ACATA I CATOT GEACOCTITICO ACOCEGO.	2199
5 3	7241	THE WAR GOAL ARGAN TO A LOW-MARK ROOF TITTEGACEDAN THE GATCHETTOC THE HELF THE WAR TO A TOWN TO A TOWN TO A TOWN TOWN THE WAR TOWN TOWN THE WAR TOWN TOWN TOWN TOWN TOWN TOWN TOWN TOWN	1686 2259
5 3	1687 A 	OF A FORCAL A FOR A A A STEADAGA TA TAGA CONTRA A TITO A A A A TOTA CONTRA CONT	1746
Š.	1747 T		1806
ž 5	1 807 5	ACANGALCTECTCATGCTGTCAGGAGACATTCAAACGGGTTTTGAFCAAAGAAGAG ACTAEGATCTATTATAGTATCTAAAACTCGGTCTTCATGCAGACACGCGAAAACAAAT ETTTTTTTTTTTTTTTTTTTTTTTTTTTTT	2379 1866
£ 5	2480 G 1867 A	ACTION TO THE STATE OF THE STATE OF STATES AND ASSOCIATION OF STATES AND ASSOCIATED OF STATES AN	2439 1926
£ :	2440 A	NELEBEAGEATUM CETATOAN GAGGGGGT I GEGAGGAATAN CHGAGTAFFGGFGGA SECHTAN ASTITTOCTASTITOAN COTTAGGAFT COTGGAGGGAAGATATATATATAA	2499 1986
ì	V 00057	BELLINGS OF THE CONTROL OF THE STATE OF THE	2559
5 £	1987 C 1 2560 C	POPTEGANGAGEO PALALAAAAT LEGAGAAGGEO EGGAACACCAACAAAAATGACTGCAACCTGCAACGACCAACAAAAAATGACTGCAACAACAACAAAAAAATGACCCAACCAA	2046 2619
5 =	2620 A	«ATEANGATETTAGTATEATTEGTGATEATTEGGGAETTETGAAAGTTEEAGAA 	2106
5 3	2107 A 1 2680 A	TAAATCAJATGSTATGTAAYAS GACCSTGTGCLCAAAAGAAGAAGGGGTGAAGGAAGCAAC 	2155 2739
5 £	2167 C - - 	16.7 PETECTIAAACAATOA TOAAAAAATIAN OO JILIGAAGGALCAGAATGAAGGAATGAAGAATGAAGAATGAAGAATGAAGAA	2226
8 3	2227 A 1 2800 A	WITANA PATETE CONSTANDATE CANATITE CASTAGAAA TOS CAMAAA GAA TUCLACII KOLACII K	2286 2859
5 ±	0 0987 - 	GAACAGGAATGCAAAASCAGAAAATGAATGATAGCATGGATACCTCAAAAAAAGGAAGAG 	2346 2919
5 3	2347 A 	AALGAGA PERASGAPE GAZEGAGA GERGELA AACEG GA TECALIGI PELCTCA ELELETETETETETETETETETETETETETETETETETE	2406
5 3	2407 C 1 2380 C	AGATGTGACTGTATAACTTTGGCAGGTGTGTTTATGGCGAGATTTAATATCTTGAGGT 	2466 3039
5 ŝ	2467 C 	TTTTTGFGGGATATAAAATGFGGGATGCAATGTTTGGGTGATFGCTAAGCCACTTGAA 	2526 3099
5 E	~ c	IGTFAGTCALEGT 	2586 3159

```
PAT 18-FEB:1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia; Eutheria; Primates; Catarrhin; Hominidae; Homo.

[ (bases 1 to 4580)
Funq.Y.K.T., T'Anq.A., Murphree,L.A. and Benedict,W.F.
A method for detecting the predisposition to refineblastoma and a method for detecting a refineblastoma evec in tumens using a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi,
                                                                                                                                                         515+
                                                                                                                                                                                                                                                                                                                                                                                                                    2947 GCTTGTTTATAAAATTTTGCTTTTAATTAAATAAAAGCTGGAAGCAAAGTATAACCATA 4006
                                                                                                                                                                                                                                                                                                                                                                                                                                        3007 TGATACTALCATACTGAAACAGATTLCATACTTCAGAATGTAAAAGAATTLACTGAL 3066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3580 TGATACTATCATACTACTGAAACAGATTTCATACTCAGAAATGTAAAAGACTTACTGAT 3639
                    2827 CCCATTCACCAAAATTATCCTGAACTTCTTCTGAAAATGGATATTATTATAAA 2886
2587 AGTIGTAGCAGATIGTTICCTCTTCCAAAGTAAAATTGCTGTGCTTTATGGALAGTAAAA 2646
                                                                   2647 ATGGCCCTACACTGCACTCCTGATAACCCAGGCCTGTCTGACTACTTGCCTTCTTTG 2706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                488 ACATGTGAACITATATATTTGACACACCAGCAGTTCGATATCTACTGAAATAGT 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67 ACATGTGAGTTATATATATGAGAGGGAGGAGTTGATATGTAGTGAAATAAATTGT 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sylen 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7 ATGTCAAGACTGTTGAAGAAGTATGATGTATTGTTTGCACTCTTCAGCAAATTGGAAAAG 66
                                                                                                                                      2887 AAAAATTACTAATTIFACACATTAGATTIATITTACTATGGAATCTGATATACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97.98; Score (048.4; DB 6; Length 4580;
99.28; Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AU1444 4.6 kb retinoblastoma gene probe.
A01444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches 12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             retinoblastoma gene probe
Patent: EP 0293266-A 1 40 NoV 1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /ordanism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESEARCH DEVELOPMENT FOUNDATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:9606"
840 c 811 q 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A01444.1 GI:345125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 1083; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .4580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ouery Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                             ς
ζ
                                                                                                                                                                                                                                           <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90
                                                                     ò
                                                                                                                                          ò
                                                                                                                                                                                                                                                                               င်
                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

CALLOGES GATTHELLE ALCAACACA THEFT GATTACCO GATTACCO GAAAACCC GAAAACCC GAAAACCC GAAAACCC GAAAACCC GAAAACCC GAAAACC THEFT THEFT TACCACC GAAAACCC TOTACCC GAAAACCC TOTACCC OTACCC OTACCC OTACCC TOTACC TOT		AGTIICTIGGATCACATTFTTAFTAGCTAAACGGGAAGTAFTACAA 186 	9 - 5 - 7	ATGITGCTCAAAGAACCAIAIAAAACAGCIGIIAIACCCAITAA1 306 	TICGAAAFACCCAGNGGAGGTCAGAAAGAGGATAGCAAAACAAACAA 366 FIFIL III FIFILIHIHIHIHIHIHIHIHIHIHITI TICGAAAACCCCAGNGGGGTCAGAGAGAGGGAGGGAGGAAAAAAAAAA	AFTATTGEAGTTCTCTGTAAAGAACATGAATGTAATATAGATGA 426 	CCAAAAATTTTATACC - - - - - - - - - - - - - - - - - -	OGCTIGAAAALCTTICLAAACGATACGAAGAAFTTATCTTAAA 54 	AATCATGATAAAACTCTTCAGACTGATTCT 60	VYCACGAAAAAGITAACSITGATGAAGAGGGGAAT 66 	JETTATGAGACTAICCAACAATTAATGATG 72 	GATCAACCTTCAGAAAFCTGATTTTCCTATTTTTAACAACTGC 78 	ATAGGATACATCTTTAAA 84 	SATCACAGCSATACAAA 90 HILLIHIHII SATCACACATACAAA 13	PATGCTTAAATCAGAAGAAGAAGGA 966 	CAACATITICATATGICITIALIG 19	CAGAACTACATCTCAGAATCTTGAT 108 	TGTGCTTAATTTAAAAGCCTTTGAT 1 	ARASTITIATORARGOGRAROTIGAO PAGARARGAN 120
	1877 1877 1877 1877 1877 1978 1978 1978	SCALLGGISVTAAAAGT 	AFGGAAGATGATCTGGT TITTLTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	ĮSĮ.	I - AÇ I I I I I CAÇ	GAAAATGATACAAGAA TTTTTTTTTTTTT GAAAATGATACAAGAA	GIGAAAAAIGITIATI 	TCTAALGGACTTCC/ -	AATAAAGATG LITELELIT AATAAAGATG	AIAGACAGII 	GTAALICCIC DINITION GTAATICCIC	ATTT FAATTCAGGAAG	ACAGTGAATO ACAGTGAATO	GAGAAATITU LILLILLI GAGAAAITIU	CTTGGAGITE	TTATC	GCG FGG 11111 GCG FGG	ICTGGAACAGATTTGT ITTTTTTTTTTTTTTTTTTTTTGT	TITACAAAGIGATCG ELLELELELELE ELLACAAAGIGATGG

1747 TCIGCTGTTAAFCTTCCTCTCAAAAAAACTGCAGAGAGAATATGTT 1806 2287 ATTIGGASTALGCTICTACGAGGCCCCTACCTIC+CACCAATACCTCACATICCTCGA 2345 2346 ABGGCTTA AASTUCKY AGTICACOCTIACGGAITCCLISGASGGAACAPOTATATIA 2405 1627 AAACATTTAGAACGATGTGAACATCGAATCATGGAATCCTTTGCATGGCTCTCAGATTCA 1686 1687 CCTTTATTTGAFCTTATTAAACAATCAAAGGACGAGAAGGAGGACGAAGTGATCACGTTGAA 1746 TCACTGTTTTATAAAAAGTGTATCGGCTAGCCTATGTCGGGGTAAATACACTTTGTGAA 1566 1927 ICACIGIIITAIAAAAAAGIGIAIGGGIAGCTAICIGGGGCTAAAIACACIIIGIGAA 1986 1627 FIGFAGANIAGIAGGAFFEAFFEAFFEAGAFAGGAIIGGACCAAATTAIGAIGIICC 1686 1687 ATGTATGGCATATGCAAAGTGAAGAATATAGACCTIAAATTCAAAATCATGTAACAGCA 1746 2107 AIGHAIGGCAFATGCAAAGTGAAGAATATAGACCTIAAATICAAAAICATGTAAGAGA 2156 1747 TACAAGGATCTTCCTCATGATGTTCAGGAGAGATTCGAAGGTGTTTTGATGAAAGAAGAG 1806 1867 ATTTEGRAFIANGTIGGAGGAGGGCCCTAGGTGGAGGATAGCTCACATTGCTCGA 1926 1927 AGCCLIACAAGII KCTAGTTCACCCIIACGGALICCIOGAGGGAACATCFAFATFTCA 1986 1987 COCCEGARGAGICCAIAIAAAAIIICAGAAGGICEGCCAACAACAAAAAAAAGACTCCA 2046 2406 CCCCTGAAGAGTCCATATAAAATTTCAGAAGGTCTGCCAACACCAACAAAAAAAGACTGAA 2465 2047 AGATCAAGAATCITAGTATCAATTGGTGAATCATTCGGGACTTCTGAGAAGTTCCAGAAA 2106 2466 AGATCAAGAATCTTAGTATCAATTGGTGAATCATTCGGGGGCTTCTGAGAAGTTCCAGAAA 2525 2167 CCTCCTAAACACTGAAAAAACTACGCTTLGALALIGAAGGAICAGATGAAGGAAGATGAA 2247 AGEANACIATOTOCOMOGINGRATOCOMATITICANGONGANACIOGOMOANICATOTOCOMO LESS 2646 AGTAAAPAD TPO AGGAGAG PPAAATIIGAGGAGAAAQIIGGGAGAAATGAGIIGIAUT 2705 2287 CGAACACGAAATCCAAAAGCAGAAAATGAATACCATGCATACCTCAAACAACAAGAGAG 2346 1267 CCTTTATTTGATCTTATTAAACAATCAAAGGACGGAGAAGAGGACGAACTGATGAGGTTGAA 4387 TOTOCHGTAAGAUGTGGAAAGAAAAAGGTTGAAGTAGGGGTGTAAATTGTACTGGAAAT 1567 CGCCTTCTGTGTGGGGGCGCCAGAATTAGAACATATGAGGAGGGGTTTTGCAGGAGAGA 2167 FACANGANTINITOTESTOTESTICAGAGACATICAAACGIGITTIGATCAAAAAGA 2107 ATAAATGAGALGGLALGLAACAGOGACCGLGTGCLCAAAGAAGAAGTGCTGAAGGAAGGAAG 2526 ATANATGASATGGTATSTAA/YAGGAGGTGTGAAGGAAGGAAG 1807 GAGTATGATTCTATTATAGTATTCTATAACTCGGTCTTCATGGAGAGACTGAAACAAAT 1327 ICIGOLIGICOTOTITARICHICOLOGICAGAIAATCACACHGCAGCAGALALGTATCTT THE HITTELLITE HITTELLITE TO THE HITTELLITE 1507 .ó 3 ź. q qq a ò à 9 8 9 q $^{\circ}_{\Sigma}$ ò Ş qa qq ò QQ Ś 셤 ö á Ś

E C E

594 4

5 B19

474 a

BASE COUNT

```
PAT 08-SEP-2000
HITTELLITELLE IN THE FILL OF THE FILL OF THE FILL OF THE FILL OF THE FILL OF THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE AND THE TABLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            496 GYTGTTIATAAAATITESTTITAATAAAAASGGGAASGAAGIATAAAGA 3425
                                                                                                                                                                                                                                  THE FELLINE HELLITH HITTELS HELLIGING ACCIDING A PROPERTION OF THE HITTELS AND THE ANALYSIS AND A SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF THE SECOND ASSESSMENT OF TH
                                                                                                                                                                                                                                                                                                                                                                                                   2407 PASATGIGACTGLATAACTTTGCCAGGTTCTGTTATGGCCAGATTTAATATGTTGAGGT 2466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2947 GYLIGITHATAAAALIHIGYHHAAHIAAAFAGGGAAGGAAAGFAFAAGGAFA 3006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8007 TGATACTATACTACTGAAACAGATTTCATACCTCAGAATGTAAAAGAACTTACTGAT 3066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u> 44.26. TGATACTATOPTACTACAAQCAGATTTCATACCTCAGAATGTAAAAGAACTTACTGATT3485</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2467 (TILLIBIOMATALAAAATGTGCAAATGCAATTGTTGGGGAATTGCTAAGGCACTTGAA 2526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2946. ALGITAGLIMITATITATAMANMI IGAAAATITITIGIGIAAALIGITAAAT TITAAAA 3005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (4) U.S. AGTIGIAGGAGAITGITTGCTGTTGCAAAGTAAAATTGCTGTGCTTTATGGATAGTAAGA 3065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2647 ALGGCCCLADAGLGGGAGLCCLGALAACCCAGGCCLGLCTGACLACTT GGCTGCTTTLG 2706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2202 IAGGATATABUDAKUITIGUTGITITITATIAATITAIAIGIAITITITITAATIT 2766
                                                                                                                                                                                                                                                                                                                                                                                                                                                              2587 ACTITCHACCACALICITECTITICCAAACTAAAATTGCTGTGTTTATGGALAGTAAGA
                                                                                                                                                                      2.4.7. AAATGAGGATTTCAGGACCTTGGTGGACACTGTGTAGACCTCTGGATTCATTGTGTCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25.27 AEGITAGICATIGITATITATACAAGATIGAAAATCITGIGAAATCITGCAITITAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2827 CCCATICACCAAAAFIATCCTGAACFCFTCTGCAAAAAFGGATATTATTAGAACTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2887 AAAAATTACTAATTTTACACATTAGATTTTATTTTACTATTGGAATGTGATACTGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCAM, H. and LOC,E.Y.-H.P.
Retinoblastoma gene cancer suppressor and regulator
Patent: US 5998134 A 4 07 DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3067 TATTITCITCATCCAACITALGITITAAAFGAGGATTATTGATAGT 3113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 4 from patent US 5998134.
AR091965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AR091965.1 01:10018719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            l (bases 1 to 2994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unitassitied.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknewn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No I I N I 4:451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPESSION
VPRSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           - FCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TelfichAI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PESTILI 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AR0313465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       L \times TIS
                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                  Ξ
                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
```

/orqanism·"unknown"

```
967 TTATCCATICAAAATTIIAGCAAACTICIGAALGACAATITICAIALGICTIALIG 1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1360 ACAGTGAATCCAAAAGAAAGTATACTGAAAAGATTGAAGGATATAGAATATAAA 1419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    000 GEGAAAAAEGETTALEEAAAAAFETTEALACCEELEAAAATTCEGEGACEFGEAAGA 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1120 AATAAAGATCTAGATGCAAGATTATTTTTGGATGATAAAAAGGGTTFGAGACTGATGTTT 1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1240 GTAATTCCTCCACACACTCCAGTTAGGACTGTTATGAACACTATGCAACAATTAATGATG 1299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1300 ATTITAAATITAAGCAAGTGATGAAGGTTCAGAAAATGTGAIITGGITTAAAAAAAGTGG 1359
                                                                                                                                                                                                                                                                                                                                        67 ACATGEGAACTIAIATATITGACACAACCAGCAGTICGATATCIACTGAAATAAATTCI 126
                                                                                                                                                                                                                                                                                                                                                                                     5.4.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        867 GAAAATGATACAAGAATTATTGAAGTTTTTCLGLAAAGAAGATGAATGLAALATAGATGAG 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          427 GEGAAAAAGTTIATITGAAAAATTTTATACCITTATAGAATTCTTGGACTTGTAACA 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       547 AATAAAGATCTAGAAGATTAFTIFTGGALAATGATAAAAGTCTICAGACTGTGATLCT 606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  607 ATAGACAGTTTTGAAACACAGAACACCACGAAAAAGTAACCTTGATGAAGAGGTGAAT 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               667 GTAATTCCTCCACACACACTCCAGTTAGGACTGTTATGAACACTATCCAACAATTAATGATG 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      727 ATTTTAAATTCAGCAAGIGATCAAACCIICAGAAAICTGAIIICCIAIIIIAAVAACLGY 786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  580 ATGTCAAGACTGTTGAAGAAGTATGATGTATTGGTTGCACTCTTCACAAATTGGAAAAG
                                                                                              Saps
                                                                                                                                                                 7 ATGTCAAGAGTGTTGAAGAAGTATGATGTTATTGTAGTGTTGTAAAATTGAAAAG 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   127 GTTTGGTGGTAAAAGTTGTTGGATGAGATTTTTTTTAGGTAAGGGGAAGTATTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                760 ATGGAAGATGATCTGGTGATTTCAGTTAAIGCTAIGTGTGCTAGATTAITITATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       880 GGTTCACCTCGAACACCCAGGCGAGGTCAGAACACCACTCGAACAATACTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               787 ACAGTGAATCCAAAAGAAAGTATACTGAAAAGAGTGAAGGATATAGGATACATTTTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   847 GAGAAATTTGCTAAAGCTGTGGGACAGGGTTG1G1GGAAA11GGA1CACACATACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HELLITTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELlettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  807 GGTTCACCTCGAAGACCCAGGCGAGGICAGAA AGGACIGCACGGAIACCAAAA AACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     487 TCTAATGGACTTCCAGAGGTTGAAAATCTTTCTAAACGATACGAAGAAATTTATCTTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           247 AAACTOTOACOLOOCALGLEGGIGAAAGAACCALALAAAAGAGOLOLIALAOCALLAAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 2994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inde Is
Score 2415; DB 6;
Pred. No. 0;
                                                                                     O, Mismatches
                                   100.0%;
    77.68;
                                                                                Matches 2415, Conservative
                                            Local Similarity
    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                             a
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>⊋</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ö.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CP
CP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

```
1447 GOMBAGACAAACTETTETTATTATAAGESTATGAAAAGETAAAATTAAAAATTETTA 1506
1440 GOMBAGAAAAGEAAAGELGABAGTTOGABAGGGAAAGGAAAAGTAGAAAGTAGCTGTGT 2079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.80 TCACLOTITIAIAAAAAAGTGTATATGGGGTATGTCGGGGTAAATAGACTTGTGAA 2139
1540 TTATCCATTCAAAATTTTAGCAAACTICIGAATGACAACAITTTICATAIGTCTTTAITG 1599
                                                                                                                                1. 27 GOTTOPOPICITICACONTENAMIOSCOAFATATAGGAGAAGTACATCICAGAATGTTGAT 1086
                                                                                                                                                                                                                                                                 18 cm gegledden i gaeth graa i geceaca far acagaagraca ferfoadai'i 1659
                                                                                                                                                                                                                                                                                                                                                                                          1-87 ICTGGAACAGAITTGTCTTTCCCAIGGAITCTGAATGTGCTTAAITTAAAAGCCITTGAT 1146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13.17 TELLACAAAGIGATGGAAAGITTTATCAAAGGAAAGGAACTTGACAAGAGAAATGATA 1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1257 AAACALLIAGAACGATGIGAAAATGGAATGGAATGGGATGCCTTGCATGGCTCTCAGATTCA 1266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1780 AAACALITAGAACGAYGYGAACAYGGAAYGGAAYGGGAAYGGCYYGGAYGGCYCYGAGAYYCA 1839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1267 COTITATITGATCITATTAAACAATCAAAGGACCGAGAAABGACAAAHGATGATCACHIGAA 1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.427 TOTGOTTG HOST CITTANTETFORT OF GAGAATAA TOACACAGCAGATATGITATOTT 1386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1900 TOTACTEGEOGECTEAAACTEGECAGAAAAATCACAGAGGAGAAAAATATGTA 1959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1387 FELECTGTAAGAFCFCGAAAGAAAAAGGTTCAACTACGCGTGTAAAFFCTACTGCAAAF 1446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1507 ICACIGIIFFATAAAAAGUGTATGGGCYAGGCTATGTGGGGTAAATAGAGTTTTGTGAA 1566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1567 GGCCTTGTGTGTGTGAGGAGGAGAAWWAGAAAWWYGATGWGGAGGGWWWYGGAGGAGAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.40 CGGC11C1GTC1GAGCACCCARAATTAGAAATATCATCATCAGAGGCTTTTTCAACAAAAC 2199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1627 CTGCAGAATGAGTATGAACTCATGAGAGACAGGCATTTGGACCAAATTATGATGTTCC 1686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2200 CIGCASALGAGTALGAAGTGALGAGAGAGAGGGATTFGGAGGAATTATGATGTGTFG 2259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2260 AIGIAIGGAATAFGCAAARFGAAAFATATAGACCTTAAAFTCAAAATCAFFGAAAGGA 2319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.47 FARAAGRATCHTCCHCATGETCHTOHEAGCAGACATTCAAACGTTTTHTGATCAAAGAGAG 1806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2320 FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI FELLI F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 (80 GAGTATGALICTATTATAGATTCTATAACTCGGTCTTCATGCAGAGACTGAAAACAAAT 2439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2440 ATTIIGGASTATGOTTOPAOGGOOOOTTAGTTOGTOAATAOOTGAOAFFOOFFOGA 2499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1927 AGGCCITACAAGTITOCTAGTICACCCITACCGATICCTGGAGGGAACATATTTAA 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-0 AGCCTIACAAACTICCIACTICAACCTIACAATTAATAATAAAAATTAATATATA 2559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26.20 AVATOAAVAATOTTAAYATOAATPOYTOAATPATTOTOGAAVITOTTAAVAAATTOTAAAAA 2009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1987 CCCCTGAAGAATCCATATAAAATTTCAGAAGGTCTGCGAACAGGAAGAAAAAATGAGTCCA 2046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2105 ASAKSAASAA IOTIVASTA IOAA INGGIISAA IOAA IOAA AAGII OOGAA IOAAAAA AAGII OOGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \tilde{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u> 2</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     â
```

```
linear PAI 14-FIB-2503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ö
                                         2680 ATAAATICAGGTATGTAACAGGACGGCGCGCGCGAAAAGAAGTGCGGGAAGAAGAAG 2739
                                                                                                                                                                                            2740 CCTCCTAAACPACIGAAAAACTAAGTTIGATAITGAAGGATCAGATGAAGCAGATGGSA 2749
                                                                                                                                                                                                                                                                                                           2227 AGTAAAQATCTCCCAGGAGAGTFFAAATTTGAGGAGAAGTGGGAGAAATGAGTTGTAGT 22H6
                                                                                                                                                                                                                                                                                                                                                                                     2800 AGTAAACAICICCCAGGAGAGICCAAAIIICAGCAGAAACIGGCAGAAAIGACIICIACI 2859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2287 CHANCACAGAAIGCAAAAAGCAGAAAAIGAAIGAAIAGCAIGGAIACCICAAACAAGGAAGAAGA 2346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2860 CGAACACGAATGCAAAAGCAGAAATGAATGATAGCATGGATAGCTCAAACAAGGAAGAG 2919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2347 AAAIGAGGATCICAGGACTIGGIGGACACIGIGIACACCIGGGALICATIGICTCAA 2406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2920 AAATGAOGATTTWAGACCTTGGTGGAAGATGTGTGTACACTCGGAATCATGTCTCA
2167 CCTCCTAAACCACTGAAAAACTACGCTTTGATATTGAAGGATCAGATGAAGGAGGATGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  307 OPTIMITAD PROGRANDA POR PAGRAGE PRAGRA PAGRACI GLACICA PAGRA PAGRA SU SU SU SU PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA PAGRA P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            127 COATTOCHGGTAAAAGTTTGTTGGALGAGATTTTTALLAGGTAAAGGGGAAGTATTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0, Japs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7 ATGTCAAGAGTGTTGAAGAAGTATGATGTATGTTTSCACTCTTCAGCAAA11GGAAAGG 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 6, Length 2994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0, ladels

    (bases 1 to 2994)
    Antelman, D., Gregory, R.J. and Wills, K.N.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 77.6%; Scorc 2415; DH
100.0%; Pred. No. 0;
Live. 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Retinoblastoma fusion polypeptides
Patent: US 6074850-A 3 13-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 3 from patient US 6074850.
AR098189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism-"unknown"
618 c 593 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ocation/Oualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AR098189.1 GI:12807446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 2415; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2407 CACATCTGACTGTAT 2421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2980 CAGATGTGACTGTAT 2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       974 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR098189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FFATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H H H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      λο.
•--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                작0
.
    Ś
                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ÷
                                                                                                                                                                                                                                                                                                                                                                                         급
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ē
```

3

ŝ

40.5

£ 5

2 5

5

항 윤 항 윤

ANTAGEMENT CONTROLLE CONTR	RAAALGA RA'AAGAAHA HIGAAGHITITTIGH RAAATGA IA'AAGAAHA HIGAAGHITITTIGH BISAAAA GHITA HILLIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHI
--	---

Ē 5 ŝ 5 Ē 3 2 5 $\dot{\Xi}$ 3 === Š â 7 Ē 5 ŝ ŝ

```
PAT 20 JUN 2007
                                                                                                                                6,6,77
                                                                                                                                                           16.86
                                                                                                                                                                                                                                                                                                                                                                      1976
                                                                                                                                                                                                                                                                                                                                                                                              54.43
                                                                                                                                                                                                                                                                                                                                                                                                                                  2106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2740 CCTCCTAAACGACTGAAAAACTACGCTTTGATATTGAAGATCAGATGAAGCAAGGA 2799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2860 - GGAACACGAAAGGAAAAAGAAAAGAAIGAAAGGAATAYCICAAACAAAGAAAGA - 2919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1687 ATGTATGGCATATGCAAAGTGAAGAATATAGACCTTAAATTCAAAATCATTGTAACAGCA 1746
                                                                                                                                                                                                                                                                                                                   186.6
                                                                                                                                                                                                                                                                                                                                                                                                                      1927 AGCCCTTACAAGTTTCCTAGTTCACCCTTACGGATTCCTGGAGGAACAACATCTATATTTCA 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2287 GGNACACGANTGCANAAGCAGANATGANTGATAGGATGGATACGTCANACAAGAAGGAAGA 234%
1507 TOACTGITITATAAAAAAGTGIATCGGCTAGCCTATCTCCGGCTAAAIACATTGGGAA
                                                                1627 CTGCAGAATGAGTATGAACTCATGAGAGAGAGGCATFTGGACCAAALTATGATGTGTTCC
                                                                                                                                                                        1747 IACAAGGAICTICCICATGCIGIICAGGAGACAITCAAAGGIGITITICATCAAAGAAGAG
                                                                                                                                                                                                                                                                          1807 GAGTALGATICTATIATAGTATICTATAACHOGGICTICATGOAGAGACTGAAAAAA
                                                                                                                                                                                                                                                                                                                                         2380 GAGTATGATTCTATATAGTATTCJAJAACJCGGICTICAJGCAGAGGTGAAAAAAAAAA
                                                                                                                                                                                                                                                                                                                                                                   1867 ATTITGCAGTICCACGAGGCCCCCTACCTIGICACAAIACCICACALFCCICGA
                                                                                                                                                                                                                                                                                                                                                                                 2167 CCTCCTAAACGACTGAAAAAACTACGTTTGATATTGAAGGAFTAGA FGAAGGAAAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2800 AGTAAACA FOTOGCAGGAGAGTECAAATT FOAGCAGAAA CLOGMAAAA GAMTI MAATI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2347 AAATGAGGATCTCAGCACCTTGGTGGACACTGTGTACACCTGGGATTCALLGTCTCA
                                                                                                      1567 GGCCTFCTGTGTGTGAGCACGCAGAATTASAACATATCATCTGGACCCTTTTTCCAGCACCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2047 AGATCAAGAATCTTAGTATGAATTGGTGAATCATTCSGGACTTCTGAGAAGTTCCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AR207831 2994 bp. Sequence 3 from patent US 6379927.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2407 CAGATGTGACTGTAT 2421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2980 CAGATGTGACTGTA1 2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AR207831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ROGER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δλ
                                                                           ā
                                                                                                                                                                                                                                  90
                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              D
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                     Š
                                                                                                      ò
                                                                                                                            qq
                                                                                                                                                         ð
                                                                                                                                                                               g
                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
```

```
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             947 AATAAAGAFCTAGAFGCAAGAFTATFFFGGAFGATGATAAAAGTGTFCAGAGTGAFTGT 606 .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            [360] TCTAAFGGACTTCCAGAGGTTGAAAATCTTTCTAAACGATACGAAGAAATTTATCTTAAA 1119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                187 AFGGAAGALGATCFGGTGATTTFCATTTFCAGTTAATGCPATGTGTCCTTFGACTATTTTATTT 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    427 GEGAAAAATTTTATTTCAAAAATTTTATACCTTTTATGAATTCTCGTGGACTTGTAACA 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         487 POTAA ESGACITIC GGGGGIIG GAAAA TOTITI CITAAAC GATAC GAAGAA II TITAT CITAAA 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   607 ATAGACAGITITIGAAACACAGAGAGACACGAGGAAAAAGITAACCITIGAIGAAGAGGIGAAT 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         667 GTAATTCCTCCACACTCCAGTTAGGACTGTTATGAACACTATGCAACAATTAATGAFG 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    787 ACAGTGAATCCAAAAGAAAGTATACTGAAAAGAGGATGTAGAATATAGGATACATCTTTAAA 846
                                                                                                                                                                                                                                                                                                                                                                                                                                     -40 ACATGIGAACTIATATATTIGACACAACCCAGCAGTTCGATATCTACTGAAATAAATTCT 699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         127 GGALIGGIGGTAAAAGTTTGTTGGATGACATTTTTTTTTAGGTAAAGGGGAAGTATTACAA 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               * E. A I GGAAGA I GATET GO FOAT I TO CALTE AAT GOTAG TOOT COTT GACTATITTATT 819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   247 AAACTGTGACCTGCCATGTTGCTCAAAGAACCATATAAAACAGCTGTTATACCCATIAAT 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        нян аатталастаадлассадасадастадаат байын аатталасталасдаладад бай
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              447 GAAAA BATACAAGAATTATTGAAGTTCTGTGTAAAGAAGATGTAATTAGATGAGTGT
                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                              7 ALGLICAAGACTGI IGAAGAAGIA IGATGI ATTGITTIGGACTICTITGAGGAAATTGGAAAAGG 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ċ
                                                                                                                                                                                                                                                                                          Score 2415; DB 6; Length 2994;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                          Ċ
                                                                                                           1 (bases 1 to 2994)
Antelman, D., Gredory, P.J. and Wills, K.N.
                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                               Retinoblastoma fusion proteins
Patent: US 6379927 A 3 30 APR 2002;
                                                                                                                                                                                                             /organism-"unknown"
618 c 593 a
                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                           77.6%; Seu.
100.0%, Pre
0;
                AR207831.1 GI:21507687
                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                   .2994
                                                                                            Unclassitied
                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                       0 7/6
                                                        Unknown.
                                                                         Unknown.
                                                                                                                                                                                                                                                                                                                              Mat (11,05 2415)
                                                                                                                                                                                                                                                                                        Querry Match
Best Local S
                                                                                                                                                                                                     SOLITOR
ANYESSINN
VERSIN
                                                                         RCAN LSM
                                                                                                                                                                                                                                   ASE CONT
                                                                                                                                                                FULKNAL
                                                                                                           REFERENCE
                                                                                                                            AUTHORS
                                     KEYW RUS
                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ξ
```

```
2146 CROTTOTECTS ARGUNG CARARATA FALLICA FACATA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CARACA CAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1807 GASTATGATTSTATTATAGTATTSTATAGTSGGSSSTSATGCAGAGAGTGAAAACAAAT 1866
1360 ACAGTGAATCGAAAGGAAAGTATACTGAAAAGGATGAAGGATATAGGATACATGTTTAAA 1419
                                                                                                                                                                                                                                           1420 GAGAAATTTGCTAAAGCTGTGGGACAGGGTTGTGTGGGAAATTGGATCACAGGGATACAAA 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 967 ITATCCATTCAAAATTTTAGCAAACTTCTGAATGACAACATTTTTCATATGTCTTTATTG 1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1027 GOGTGOGGTOTTTTBAGGGGAGAGGGGAGATATAGGAGAAGTAGATGTGGGAALGTTGAL LU86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1087 ICTGGAACAGAIITGICIIICCCAIGGAIICIGAAIGIGCIIAAIIIAAAAGCCIIIGAI 1146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1147 ITITAGAAAGIGAIGGAAAGIHIALGAAAGGAGAAGGGAACIFGAGAAGAAAGAIA 1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1780 AAACATTIAGAAGGAIGIGAACAICGAAICGAAIGGCIIGCAIGGCICICAGAITCA 1839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1267 CCITTATIFGATCTIATIAAAACAATCAAAGGACCGAGAAGGACCAACTGATCACCTTGAA 1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1567 ICACTETTIAIAAAAAGTGTATCGGCIAGCCIAICTGCGGGGGAAATACACITTGTGAA 1566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1567 GGGGFFGFGFGFGAGCAGCAGAATTAGAAATATGAFGFGGAGCGFFFFGCAGCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2260 ATGTATGGCATATGCAAAGTGAAGAATAIAGACCTTAAATTCAAAAATCATTGTAACAGCA 2319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1747 TACAAGGATETTTCTGATGTTGTTCAGGAGACATTCAAAGGTGTTTTGALCAAAGAAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2320 TACAAGGAICTICCTCAIGTIGTGAGAAAAATICAAAAGIGTTIIGALCAAAAAAAG 2279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1867 ATTITGCAGTATCCACCAGGCCCCCTACCTTGTCACCAATACCTCACATACCTCACA 1926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1627 CTGCAGAATGAGTATGAAGTGAGAGAGAGGAGTTGGAGCAATTALGALGTGTGC 1686
                                                                                                               847 GAGAAATTIGGTAAAGGTGTGGGACAGGGTIGTGTGGAAAITGGAICACAGGGAIACAAA 905
                                                                                                                                                                                                                                                                                                                                                           907 CTTGRAGITOR/TEGIAITACGAGTAATGGAATGCTTAATTGAATTGAAGAAGAAGAAGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1387 TCTCCTGTAAGAFCTCCAAAGAAAAGGTTCAACTACGCGTGTAAAFTGTAAFFGGAAAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1960 TCTCCTGTAAGATCTCCAAAGAAAAAGGTTCAACTAGGGGTGTAAATTCTAGTGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2020 GCACACACACACACACTICAGOCTTOCAGACGACACACACATGAAATOTACCTOTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1687 ATGTATGGCATATGCAAAGIGAAGAAIAIAGAGGITAAAIIGAAAAICAITGIAAGAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1447 GCAGAGACACAAGCAAGCTIGGAGAGGGAGAAGGGATTGAAAIGIAGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

```
PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PR 15 NoV 1996-0S 08270777-14 FFF 1967-05 ORZBOTOGO PT FOODCAS ANTELMAN, KICHARD J. CHECOLEY, KENNETH N. WILLS PC COZHEL SOCK SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY 
                                                                                                                                                                                                           1927 APPOULE TANDE OF TRANSFER DESERVABIANCE TO 1986 THE PROPORT OF THE SECOND OF THE PROPORTION OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT OF THE PROPORT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            210). ATANATS AJABBAGALGI AAZABAGABAGGI AAAAAAAAGI GGI GAABBAAACAAC ZUUB HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2740 OTPOTANACAZIGAAAAAAATAGGITIGATAI IGHHIIIHHHHHHHHHHHHHHHHH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2440 ATTERPAGEALICTEPPAGEAGGGCCTAGGERGTGAGATAGGTGAGATTGGTGGA 2499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2047 AGATCANJAATCHIAGIAICAATUGGIGAATCAATCGGGGACTICTGAGAAGTICCAGAAA 2106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  zkon AGTAAAMATOTOMAAGAGAGAAAATTIMAGCAGAAAGGGGGGAATGAGTTGTAGT 2859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.447 AAATIJAJGATITITAGGAITT FGDTIGGACRIGITACACCTCTGGATTICAT FGTGTCA 2406
                                                                                                                                                                                                                                                                                                                                                                                                                       2500 ASCOTTANAAGHTOTTASTICAGCCTTACSGATTCGIGGAAGAACATCIATATTICA 2559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1987 PEPERGAMANTENALALAAAATTIPAMAMMICIMPAAMAMAMAAAAATGAMINGA 2046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2167 POTPOLIAAAPPAGAAAAAAFIADGTITIGATATIGAAGGAFPAGATGAAGGAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2994 bp - DNA - Linear - Procession of retinoblastona profession. Procession of retinoblastona profesion. Procession.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Antelmanjo, Gregoryjk.J. and Wills,K N
Tissue specific expression of retinoblastoma protein
Patent: JP 2001503638-A 2 21 MAR 2901;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism='Unidontified'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="unidentitied"
/db_xret="taxon:32644"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13 NOV-1997 JP 1998522958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/onalitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        595 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Strandedness: Single:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BD009728.1 GI:18638101
JP 2001503648 A/2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZUNISUNESB AZZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Popology: Linear;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 2994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ر
1 H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2407 CAGALGTGACTGTAT 2421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Z980 CAGALGIGANIGIA: 2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unidentititied
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           74,1,7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MAR 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             unidentitied.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    unclassiticd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOUR OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1,14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .ANTI IN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A PERSTON
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIJANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PESSULT 15
BESOUT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENC'E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHARS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FLATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
```

```
967 ITATCCATICAAAATITIAGCAAACITGGAAIGACAACAITIIIGAIA.GGTCTTTATIG 1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1027 GCGTGCGCTCTTGAGGTTG1AATGGCGCATATAGYAGAAGTACATATYTYAGAALCTLGAT 1086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3F ATABLEMATOCAAAAGAAAGTALACIGAAAAGAAGGAAAGGATATAGGATACATCTTTAAA 1419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HITTELLITELLE HELLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              427 GIGAAAAAIGITIAITICAAAAATITIAIACGIITITAIGAATICICITIGGACTICIAACA 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                487 PCTAATGGACTICCAGAGGTTGAAAATGTFTCTAAARGATAGGAAGAAATTTATGTTAAA 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         547 AATAAAGAICIAGAIGAAAGAITAIIIIGGAAGAIGAAAAAGAGAAAAAGAAAAAAATTCT 606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              607 ATAGACAGITITIGAAACACAGAGAAGAACACACACAAAAAGITAACCITGA1GAAGAGGIGAAT 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      667. GTAATTGCTGGGGGGGGGGGGTTGTAGGAGGGTATGAAGAAGAATTAATGAAGA 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        787 ACAGTGAATCCAAAAGAAAGTATACTGAAAAGAGTGAAGGATALAGGALACATCTTTAAA 846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 847 GASAAATPTSCTAAAGSTTTGSGAAAGGTTGTGAAATTGGATGAAAAGAA 906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67 ACATGTGAACTTATATATTTGACACAACOCAGGAGTTCGATATCTAGTGAAATACT 126
                                                                                                                                                                                                                                                                                                                                                                                            127 GCATIGGIGGIAAAAGIIICIIGGALGACATIIITAIIAGGIAAAGGAGAGGAITIIGGI IBG
                                                                                          SdpO (H
                                                                                                                                                             7 ATGTCAAGACTGTTGAAGAAGTATGATGTATTGTTTGCTCTTCACAAATTGAAAAG 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         700 GEATTGGTGCTAAAAGTITCTTGGATGACAHHIHALLAGCIAAAGGGGAAGTATTACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     807 GGTTPACCTCGAACAPPGAGGGGAGGTCAGAAPAGGAAGTGPAPAGATAGTAAAAAAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    187 AIGGAAGAIGAICTIGGIGALLICAGITAAIGCTAIGIGTCCTIGACTATITTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            247 AAACTCTCACCTCCCATGTTGCAAAGAACCATATAAAAAAGAGTGTTATACCATTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           727 ATTITAAATTCAGCAAGTGATGAACCTTCAGAAAATCTGATTTGCTATTTTAATAACAACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      77.6%; Score 2415; DB 6; Length 2994; log.0%; Pred. No. 0;
                                                                                  0; Indebs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                O; Mismatches
                                                                          Matches 2415; Conservative
Ouery Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                            â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ľ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \stackrel{>}{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
```

÷

```
2260 ATGILLE LITTELLITTELLE HELLETTELLE HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELLET HELT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2137 ATAAATCASATGATATGTAACAGGGGGGGGGGGGGGGGGAAGGAAC 2166 DILLIGHTHHHHHHHHHHHHHHHHHHH
                                                                                                 14.) BUSTGUGG FUTTGAGGTTGTAATGGCCACATATAGCAGAAGTACATCTCAGAATCTTGAT 1659
                                                                                                                                                                                                                                                                                         1-487 ICTGGAACAGATIIGICITIIGGCATGGGATTGTGAATGTGCTTAAATTTAAAAGGCTTTGAT 1146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1+60 TOTGGAACAGATIIGICITICCCAIGGATICTGAATGIGCTIAAATTTAAAAGCCTTIGAT 1719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1147 FITTACAAAGTGATCGAAAGTTTTATCAAAGCAGAAGGCAACTTGACAAGAGAAATGATA 1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1257 AAACATITAGAAGGATGTGAACATGGAATGATGGAATGCCTTGCATGGGTGTCAGATTCA 1266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.67 PRITTATELIMATOLIMATOLIMANOANICAAAGGACCGAGAGGACCAACTGATCACCTTGAA 1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ESTOCITGECHOLOGICAL COLCECTOR CAGAATAATCACACAGCAGAATATGTATET 1386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Para Correctione retinalierte energies en aangaaraan en eer geage aganatatan en 1959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1387 ICTCCTGTAAGATCTCCCAAAGAAAAAAAGGTTCAACTACGCGTGTAAATTCTACTGCAAAT 1446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1447 GOAGAGAGAGCAACCTCAGCCTTCCAGACCAGAGCCATTGAAATGTACCTCTTTT 1506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1907 TOACTGTTTTATAAAAAAGTGTATGGGGTAGGGTATGTGGGGGTAAATAAATAGTT1G1GAA 1566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2-80 ICACIGETTIA AAAAAAGIGTA POOGETACIGICOGGIAAA (ACACITICIGAA 2139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18.27 PERCAGAA BAGTATGAACTCATGAGAGAGAGAGATTTGGAGGAATTTGGATTATGATGTGTGC 1686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1887 AEGIATGGCAIAIGCAAAGTGAAGAATATAGACCTIAAAITCAAAATGATTGTAACAGCA 1746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1247 IACAASGATCTTCCTCATGCTGTTCAGGAGACAITCAAAACSTGTTTGATCAAAGAAGAG 1806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.820 IACAAGGATOTTOOTOATGOTGTTOAGGAGACATGAAAGGTGTTTTGATCAAAGAAGAG 2379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1867 ATTITGCAGTATGCTICCACCAGGCCCCTACCTTGTCACAAAACCTCACATTCCTCGA 1926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1927 AGCOCTIACANGTITCCINGTICACCCTIACGGATICCIGGAGGGAACAFCIAIATTICA 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1987 PROFIGAAGAGECCAFAFAAAFFFFAGAAGGECTGCCAACAACAAAAAFGACFCCA 2046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20047 AGATCAAGAATCITAGIATGAATTGGTGAATCATTGGGGACTTCTGAGAAGTTCCAGAAA 2106
```

Ê

Ŷ

ã

-

3 3 3 3

=

Search completed: January 17, 2003, 18:07:35 Tob time : 5202 13 secs

```
Copyright (c) 1993 - 2003 Compugen Ltd.
```

```
nucleic search, using frame_plus_p2n model
M protein
```

(without alignments) 6678.212 Million cell updates/sec January 17, 2004, 18:15:29; Search time 3403.5 Seconds

US 09-026 459A 37 4017 Little: Perfect score: Sequences

1 MSRLLINAYDYLLEALESKILEK. BLOSUM62 Xqapop 10.0 , Xqapext Scoring table:

Yqapop lu.u , Yqapext Fdapop 6.0 ; Fdapext Delop 6.0 ; Delext 2054640 seqs, 14551402878 residues Searched

lotal number of hits satisfying chosen parameters:

Missimum DB seq length: 0 Maximum DB seq length: 200000000

Listing first 45 summaries Fost processing: Minimum Match Ow. Maximum Match Lons.

Models frame parameters:

Models frame-parameters:

odels frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models frame-parameters

Models fr

apach - * about a debut																													
0 - 4 - 4 - 2 - 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 2 - 2	omb.l · ∗			_	ے	ے	Α,			ā	۔ ء	Ť.	> 75	qb_un:	4b_vi:•	+:Pq mə	em_fun:*	em_hum:	em_in:•	*:1:Ⅲ~Шa	•:wo∵wa	€110 MO	*: VO_MO	em pat:*	*:Idd_me	Ξ	Ξ,	cm_sts:*	
	inet:	1 :	7	.: *	4.	: ',	; _'	: /	 x	÷	10:		12:		14:	···	16.	17:	18:	19:	70 :	21:	:77	2.4:	: 47	: 47	26:	7.7	

em_v):•	em_hta_hum:*	em_htq_inv:*	em_htg_other:*	em_htq_mus:*	em_htq_pin:*	em_htg_rod:*	em_htq_mam:*	em_htq_vrt:*	em_sy:*	em_ht qo_hum:*	em_htqo_mus:*	com hit care and have
:67	30:	31:	\$2:	: ec ec	34:	15:	36:	37:		39:	40:	

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result heing printed, and is derived by analysis of the total score distribution.

No. Store Out-of-							
1 4017 100.0 2994 6 ARC941945 5 AC 4017 100.0 2994 6 ARC941849 5 AC 4017 100.0 2994 6 ARC941849 5 AC 4017 100.0 2994 6 IB1465 6 AC 4017 100.0 2994 6 IB1465 6 AC 4017 100.0 2994 6 IB1465 6 AC 4017 100.0 2994 6 IB1465 6 AC 4017 100.0 2994 6 IB1465 6 AC 4017 100.0 2994 6 IB1465 6 AC 4017 100.0 2994 6 IB1466 6 AC 4017 100.0 2994 6 IB1496 6 AC 4017 100.0 32.5 6 AC 402.0 4 AC 4017 100.0 32.5 6 IB 4077 6 ID 54.1 1 A 4017 100.0 32.5 6 IB 4070 1 AC 57.0 100.0 48.9 9 HUMRHIMNA A 4017 100.0 4	Result No.	Score	Ouery Match		DB	15	Description
2 4017 100.0 2994 6 ARCOPHEN 4 4017 100.0 2994 6 IBL0528 5 4017 100.0 2994 6 IBL0528 6 4017 100.0 2994 6 IBL0528 6 4017 100.0 2994 6 IBL058 7 4017 100.0 2994 6 IBL058 7 4017 100.0 2994 6 IBL058 7 4017 100.0 2994 6 IBL058 7 4017 100.0 2994 6 IBL058 7 4017 100.0 2994 6 IBL058 7 4017 100.0 2994 6 IBL058 7 4017 100.0 3232 6 ARCOZCUCU 7 4017 100.0 3232 6 ARCOZCUCU 7 4017 100.0 4839 6 ARCOZCUCU 7 4017 100.0 4839 9 HUMRHIMNA 7 4017 100.0 4839 9 HUMRHIMNA 7 4017 100.0 4839 9 HUMRHIMNA 7 4017 100.0 4839 9 HUMRHIMNA 7 4017 100.0 4839 9 HUMRHIMNA 7 4017 100.0 4839 9 HUMRHIMNA 7 4017 100.0 4839 9 HUMRHIMNA 7 4017 100.0 4839 9 HUMRHIMNA 7 4017 100.0 4839 9 HUMRHIMNA 7 4017 100.0 4839 9 HUMRHIMNA 7 7 8 4 4 4 5 6 10938 7 7 8 4 6 4 1 4 6 6 10938 7 7 8 4 6 4 1 4 6 6 1 1 1 1 1 1 1 1 1 1 1 1 1		4017	100.0	2994	: پ	AR091965	
4 4017 100.0 2994 6 AR207481 4 4017 100.0 2994 6 BBG09728 5 4017 100.0 2994 6 BBG09728 6 4017 100.0 2994 6 BBG09728 9 4017 100.0 2994 9 HDMRRSA 10 4017 100.0 3232 6 AR772831 11 4017 100.0 3232 6 AR772831 12 4017 100.0 3232 6 118497 13 4017 100.0 4597 6 105341 14 4017 100.0 4597 6 105341 14 4017 100.0 4839 6 AR330701 14 4017 100.0 4839 6 AR330701 14 4017 100.0 4839 6 AR330701 14 4017 100.0 4839 6 AR330701 14 4017 100.0 4839 6 AR1477 18 3903 9.9 4700 9 HUMRHS MINA 18 3734.5 99.8 6 AN1477 19 9.9 4740 9 HUMRHS 21 3698.5 92.1 4432 10 MOSPHOSRB 22 355 6 4.6 441 5 GDRETINB 22 355 6 4.6 441 5 GDRETINB 23 3168.5 92.1 4436 5 AN12207 24 456 5 90013 27 2129 51.0 274 6 AN28122 27 2129 51.0 274 6 AN28122 27 2129 51.0 274 8 ANTESTOR 27 218 248 9 BC01224 27 27 18 2 4863 6 AR034697 27 218 2 4853 6 AR034697 27 218 2 4853 6 AR034697 27 27 18 2 4853 6 AR034697 27 27 18 1 3249 6 123436 27 27.5 18 1 3249 6 123436 27 27.5 18 1 3249 6 123430 27 27.5 18 1 3249 6 123430 27 27.5 18 1 3249 6 123430	~	4017	100.0	2994	æ	AROSEIRS	
4 4017 100.0 2994 6 BD009286 5 4017 100.0 2994 6 181465 6 4017 100.0 2994 6 181465 1 4017 100.0 2994 6 181465 1 4017 100.0 3232 6 ARG72032 1 4017 100.0 3232 6 ARG72032 1 4017 100.0 3232 6 118497 1 4017 100.0 3232 6 118497 1 4017 100.0 3232 6 AR330701 1 4017 100.0 4839 9 HUMRHIMAN 1 4017 100.0 4839 9 HUMRHIMAN 1 4017 100.0 4839 9 HUMRHIMAN 1 4017 100.0 4839 9 HUMRHIMAN 1 4017 100.0 4839 9 HUMRHIMAN 1 4017 100.0 4839 9 HUMRHIMAN 1 4017 100.0 4839 9 HUMRHIMAN 1 4017 100.0 4839 9 HUMRHIMAN 1 4017 100.0 4839 9 HUMRHIMAN 1 4017 100.0 4839 9 HUMRHIMAN 1 4017 100.0 4839 9 HUMRHIMAN 1 4017 100.0 4839 9 HUMRHIMAN 1 4017 100.0 4839 9 HUMRHIMAN 1 4017 100.0 4839 9 HUMRHIMAN 2 4 42 5820 6 AR14477 2 122 5820 6 AR14477 2 123 5820 6 AR14477 2 123 5820 6 AR14477 2 123 5820 6 AR14477 2 119.2 6 448 6 AR12681 2 10.3 18.2 6 488 9 AR18687 2 18.2 6 488 9 AR18687 2 18.2 6 488 9 AR18487 2 18.3 18.2 6 AR1868 1 HUMRHIMAN 2 1 19.0 2 4868 9 HUMRHIMAN 2 1 19.0 2 4868 9 HUMRHIMAN 2 1 19.0 2 4868 9 AR18487 2 1 19.1 3249 6 LISOH 3 1 1 22.5 18.1 3249 6 HISOH 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	~	4017	100.0	2994	ű.	AR207831	
5 4017 100.0 2994 6 IB1465 6 4017 100.0 2994 9 IBMRRSAN 7 4017 100.0 2494 9 IBMRRSAN 8 4017 100.0 3232 6 ARG72032 11 4017 100.0 3232 6 ARG72032 11 4017 100.0 3232 6 IB496 11 4017 100.0 4839 9 IBMRBBAIRA MA 13 4017 100.0 4839 9 IBMRBBAIRA MA 14 4017 100.0 4839 9 IBMRBBAIRA MA 15 4010 99.8 4597 6 IOS369 16 4010 99.8 4597 6 IOS369 17 4027 100.0 4839 9 IBMRBBAIRA MA 18 3734.2 92.8 4591 0 MUSPPPIOSH 18 3734.2 92.8 4591 10 MUSPPIOSH 20 3726.5 92.8 4591 10 MUSPPIOSH 21 3698.5 92.8 4591 10 MUSPPIOSH 22 2555 92.9 4591 10 MUSPPIOSH 23 3148 78.4 456 5 IOSHELINB 24 456 5 ARGARES 25 255 5 19.3 486.3 IOMBIOTA 26 2555 19.3 486.3 IOMBIOTA 27 19.2 329 58.0 436.9 IOMBIOTA 28 19.0 5 ARCHELS 29 775.5 19.3 486.3 IOMBIOTA 30 720.5 18.2 448.9 SECTION 30 720.5 18.2 448.9 SECTION 31 720.5 18.2 448.9 SECTION 32 720.5 18.1 324.9 G ISSRAPISO 32 727.5 18.1 324.9 G ISSRAPISO 30 7	4	4017	100.0	2994	ç	BD009728	
6 4017 100.0 2994 9 HUMRBSA 4 4017 100.0 3.232 6 ARC72831 A 4 4017 100.0 3.232 6 ARC72831 A 4 4017 100.0 3.232 6 ARC72831 A 4 4017 100.0 3.232 6 118497 11 1 4 4017 100.0 3.232 6 118497 11 1 4 4017 100.0 4.232 6 118497 11 1 4 4017 100.0 4.232 6 118497 11 1 4 4017 100.0 4.232 6 10.3369 1 1 4 4017 100.0 4.232 6 10.3369 1 1 4 4017 100.0 4.232 6 10.3369 1 1 4 4017 1 00.0 4.232 6 10.3369 1 1 4 4017 1 00.0 4.232 6 10.3369 1 1 4 4017 1 00.0 4.232 6 10.3369 1 1 4 4017 1 00.0 4.232 6 10.3369 1 1 4 40.242 1 1 4 40.2 2 2.255 6 1 6 2.2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	S	4017	100.0	2994	ç	181465	181455 Sequence 2
7 4017 100.0 3232 6 AR0720301 8 4017 100.0 3232 6 118496 11 4017 100.0 3232 6 118496 11 4017 100.0 3232 6 118497 13 4017 100.0 3232 6 118497 13 4017 100.0 4839 6 AX330701 14 4017 100.0 4839 6 AX330701 15 4017 100.0 4839 9 HUMRHIMINA 15 4017 100.0 4839 9 HUMRHIMINA 16 4010 99.8 4597 6 109369 17 4007 99.8 4597 6 109369 18 3903 97.2 6 AX344777 18 3903 97.2 6 AX144777 18 3903 97.2 6 AX144777 18 3903 6 AX144777 19 3726.5 99.0 4591 6 E12560 20 3726.5 99.0 4591 6 E12560 21 365.5 99.0 4591 6 E12560 22 3156.5 78.6 4541 6 GDRETINB 24 2841 64.3 485 5 GORETINB 25 2555 65.6 2808 5 AY102637 27 2129 58.0 4385 5 AY102637 27 2129 58.0 4385 5 AY102637 27 2139 58.0 4385 5 AY102637 27 219.2 4368 9 HUMP107A 27 19.1 24.9 6 AX281827 27 19.2 4369 9 HUMP107A 27 729.5 18.2 4853 6 AK038697 27 729.5 18.2 4853 6 AK038697 27 727.5 18.1 3249 6 115011 27 727.5 18.1 3249 6 HUMP107A 27 727.5 18.1 3249 6 HUMP107A 27 727.5 18.1 3249 9 HOM3490	ę.	4017	100.0	2994	.	HUMRRSA	M28419 Human reti
## 4017 190.0 5232 6 AR072852 9 4017 190.0 5232 6 118496 11 4017 190.0 5232 6 118496 13 4017 190.0 4597 6 105411 14 4017 190.0 4839 6 AX330101 14 4017 190.0 4839 9 HUMRHIMNA 14 4017 190.0 4839 9 HUMRHIMNA 15 4010 99.8 4597 6 AX130201 16 4010 99.8 4597 6 AX130201 17 4027 190.8 4597 6 AX144757 18 3734.5 92.8 4597 6 AX144757 18 3734.5 92.8 4597 6 AX144757 20 3726.5 92.8 4591 10 MUSPHIO5HB 20 3726.5 92.8 4591 10 MUSPHIO5HB 21 3698.5 92.8 4591 10 MUSPHIO5HB 22 2581 95.0 4486 5 AV1202861 23 2582 558.0 4486 5 AV1202861 24 472.5 19.2 4248 9 MUMPHO7H 25 2582 558 6 6 6 2808 9 HUMPHO7H 26 272.5 19.1 2245 10 MMS 2247 272.5 19.2 448 9 SC 3771 272.5 18.2 3249 6 115011 272.5 18.1 3249 6 115011 272.5 18.1 3249 6 123436 272.5 18.1 3249 9 HOS3490 272.5 18.1 3249 9 HOS3490	r.	4017	100.0	3232	رت.	AR072041	ARC72031 Sequence
9 4017 100.0 3232 6 118496 11 4017 100.0 4232 6 118497 11 4017 100.0 4232 6 118497 11 4017 100.0 4597 6 105311 12 4017 100.0 4839 6 AX330701 13 4017 100.0 4839 6 AX330701 14 4017 100.0 4839 6 AX330701 15 4010 99.8 4597 6 109369 17 4007 99.8 2995 6 AK144797 18 3734.5 99.8 2995 6 AK144797 19 3734.5 99.8 2995 6 AK144797 19 3734.5 99.8 2995 6 AK144797 19 3734.5 99.8 2995 6 AK144797 19 3734.5 99.8 2995 6 AK144797 19 3734.5 99.8 2995 6 AK144797 19 3726.5 99.8 2995 6 AK144797 22 3156.5 99.8 4591 10 MUSPH105KH 22 3156.5 99.8 4591 10 MUSPH105KH 23 3148 78.4 455 5 100 MUSPH105KH 24 2555 6 5.6 6 464 5 100 MUSPH107H 25 2329 58.0 4486 5 AK102281 27 2129 58.0 4486 5 AK102297 27 219.2 4295 10 MMUSPH29 28 319.0 244 8 AK281825 27 3 19.2 4295 10 MMUSPH29 28 319.0 2448 9 BC042247 27 3 19.1 2808 9 HUMPH074 28 39 39 4853 6 AK034697 27 218.1 3249 6 123446 27 27.5 18.1 3249 6 123440 27 27.5 18.1 3249 9 BC034490 27 27.5 18.1 3249 9 BC034490		4017	100.0	42.42	ت	AR072032	AR072012 Sequence
110 4017 100.0 3232 6 118497 111 4017 100.0 4597 6 105411 113 4017 100.0 4639 6 AX330701 114 4017 100.0 4839 6 AX330701 115 4017 100.0 4839 6 AX330701 116 4010 99.8 4597 6 109369 117 4010 99.8 4597 6 109369 118 3933 97.2 6 ANA44797 118 3934.5 93.0 4591 6 E12560 119 3734.5 93.0 4591 6 E12560 120 3756.5 92.8 4591 10 MOSPHOSRB 121 3698.5 92.1 0 RALPP 122 3156.5 78.6 4541 6 GDRETINB 123 3156.5 78.6 4541 6 GDRETINB 124 2581 64.6 5 DRETINB 125 255 63.6 2808 5 AV002489 1011 25.2 946 5 AV002489 1011 25.2 946 5 AV002489 1011 25.2 946 5 AV002489 1011 25.2 946 9 HUMPLOTH 175.5 19.2 946 9 HUMPLOTH 175.5 19.2 946 9 HUMPLOTH 176.8 19.1 2498 9 HUMPLOTH 176.8 19.1 2498 9 HUMPLOTH 177.1 19.1 2498 9 HUMPLOTH 177.2 18.2 4853 6 AR038697 177.1 19.1 2498 9 S67171 177.5 18.1 3249 6 115011 177.5 18.1 3249 6 115011 177.5 18.1 3249 9 HOSSAPP 177.5 18.1 3249 9 HOSSAPP 177.5 18.1 3249 9 HOSSAPP 177.5 18.1 3249 9 HOSSAPP 177.5 18.1 3249 9 HOSSAPP 177.5 18.1 3249 9 HOSSAPP 177.5 18.1 3249 9 HOSSAPP 177.5 18.1 3249 9 HOSSAPP	6	4017	100.0	32.42	9	118496	118496 Sequence 1
4017 100.0 4597 6 105411 101 4017 100.0 4597 6 105411 101 4017 100.0 4839 9 HEMBRAIRA MA 4017 100.0 4839 9 HEMBRAIRA MA 4017 100.0 4839 9 HEMBRAIRA MA 4011 99.9 4240 4597 6 103369 4000 99.9 4240 9 HEMBRAIRA MA 4011 99.9 4240 4597 6 103369 6 ANI 44757 ANI 402 6 ANI 44757 ANI 4475 6 ANI 44757 ANI 4475 6 ANI 4			100.0	3232	÷	118497	118497 Sequence 2
4017 100.0 4620 6 HINBEBAIRA MA 4017 100.0 4839 9 6 AX330701 4017 100.0 4839 9 6 AX330701 4017 100.0 4839 9 6 AX330701 4017 100.0 4839 9 6 AX330701 4011 99.9 4 450 9 HUNKHS MINA 4011 99.9 4 597 6 AR144757 6 AR144757 6 AR144757 6 AR144757 6 AR144757 6 AR144757 6 AR144757 6 AR144757 6 AR144757 6 AR144757 6 AR144757 6 AR14757 6 AR14757 6 AR14757 6 AR14757 6 AR14757 6 AR14757 6 AR1475 6 AR14757 6	1]	4	100.0	4547	ę	105411	
4017 100.0 4839 6 AX 30701 4017 100.0 4839 6 AX 30701 4010 99.9 4 HUMRED MAN 4011 99.9 2 4740 9 HUMRED MAN 4010 99.9 2 450 6 109369 4057 2 6580 6 AR144757 334.5 92.1 4732 10 MUSPH105KH 3698.5 78.6 4541 6 CDRETINE 3156.5 78.6 4541 6 CDRETINE 3156.5 78.6 4541 7 CDRETINE 3156.5 78.6 4541 7 CDRETINE 3156.5 78.6 4541 8 CDRETINE 3156.5 78.6 4541 8 CDRETINE 3156.5 78.6 4541 8 CDRETINE 3156.5 78.6 4541 8 CDRETINE 3156.5 78.6 4541 8 CDRETINE 3156.5 78.6 4541 8 CDRETINE 3156.5 78.6 4541 8 ARTHOUGH 3156.5 78.6 4541 8 ARTHOUGH 3156.5 78.6 4541 8 ARTHOUGH 3156.5 78.6 4841 8 ARTHOUGH 3156.5 78.6 4841 8 ARTHOUGH 3156.5 78.6 4853 6 ARCHAGO 316.1 3249 6 115011 3249 6 123436 327.5 18.1 3249 6 123436 327.5 18.1 3249 9 HC03447 327.5 18.1 3249 6 123436 327.5 18.1 3249 9 HC03447	::	7	190.0	003 F	Ç.	HUMEBAIRA	Mis647 Human retin
4017 100 0 4839 9 HUMRHS MINA 4011 99.9 4 4597 6 109369 4011 99.9 4597 6 109369 4011 99.9 4597 6 109369 4010 99.9 4597 6 109369 4010 99.9 4597 6 109369 4010 99.9 4597 6 109369 4010 4010 4010 4010 4010 4010 4010 401	13		100.0	4839	ي	AX330701	AX330701 Sequence
4011 99-9 4740 9 HORRES 4011 99-9 4740 9 HORRES 4007 99-8 4597 6 AR144797 3734 6 29-8 6 AR144797 3734 97-2 4590 6 AR144797 3734 97-2 4590 6 AR144797 3726.5 92-8 4591 10 MUSPP105RB 3156.5 92-1 443-2 10 MUSPP105RB 3148 78-4 456 5 000113 2559 64-6 2008 1 000113 2559 65-6 2008 6 AR1205861 2559 58-0 2749 6 AR1205976 2729 58-0 2749 6 AR102877 271 19-2 474 6 AR102777 272 19-2 474 6 AR102777 273 19-2 474 6 AR102777 274 19-2 474 6 AR102777 275.5 19-3 4863 10 MMUS2777 275.5 19-3 4863 10 AR13426 275.5 18-2 4853 6 AR059584 275.5 18-2 4853 6 AR059584 277.5 18-2 4853 6 AR059584 277.5 18-2 4853 6 AR059584 277.5 18-1 3249 6 115011 277.5 18-1 3249 6 124436 277.5 18-1 3249 6 125443	7		100.0	5€ ¥ 7	5	HUMRHIMKNA	L41870 Homo sapie
4010 99.8 4597 6 109369 4001 99.8 4597 6 109369 303 97.2 4580 6 ARIA4757 A 334.5 99.8 4591 6 E12560 3726.5 92.8 4591 10 MUSPPLO5RB 316.5 78.6 4591 10 MUSPPLO5RB 316.5 78.6 4541 5 CORETINB 2581 64.3 1554 4 APTZ0742 2555 65.6 2808 5 NYRETINBP 21329 58.0 1486 5 APTU2861 21329 58.0 1486 5 APTU2828 21329 58.0 1486 5 APTU2828 21329 58.0 1486 5 APTU2828 21329 58.0 1486 5 APTU2828 21329 58.0 1486 5 APTU2828 21329 58.0 1486 5 APTU2828 21329 58.0 18.2 4853 6 ARCT8225 255.5 19.2 19.2 19.0 2808 5 ARCT8225 255.5 18.2 4853 6 ARCT8225 255.5 18.2 4853 6 ARCT8257 229.5 18.2 4853 6 ARCT8257 229.5 18.2 4853 6 ARCT828 227.5 18.1 3249 6 115011 227.5 18.1 3249 6 115011 227.5 18.1 3249 6 129436 227.5 18.1 3249 6 129436 227.5 18.1 3249 6 129436	1.5		6.66	4740	5	HUMKKS	M15400 Human retin
4007 79.8 2995 6 ARIA4757 A 4007 79.8 2995 6 ARIA4757 A 4007 37.2 4 2995 6 ARIA44757 A 4007 39.8 2995 6 ARIA44757 A 4009 9 45.0 4591 6 E12560	16		96.8	4597	ç	108369	109369 Sequence 1
3903 97.2 4580 6 AD1444 3734.5 92.2 4580 6 AD1444 3698.5 92.8 4591 10 MOSPH105KH 3658.5 92.1 445.6 5 UOALIN 3148 78.4 456 5 UOALIN 2581 64.3 1554 4 AP26742 2558 65.6 200013 22329 58.0 2784 6 AP102861 2129 55.0 2784 6 AP102861 272.5 19.3 486 5 AP102861 272.5 19.3 486 5 AP102861 272.5 19.3 486 5 AP102867 272.5 19.3 486 3 10 MMUS2177 272.5 19.3 4863 10 MMUS2177 272.5 19.2 4760 9 HOMI107A 272.5 18.2 4863 6 AR08957 272.5 18.2 4863 6 AR08957 272.5 18.2 4863 6 AR08957 272.5 18.2 4863 6 AR08957 272.5 18.2 4863 6 AR08957 272.5 18.1 3249 6 123436 272.5 18.1 3249 6 123436 272.5 18.1 3249 9 HO034490 H	7.7		39.8	2662	ي	AE144757	Aki44797 Sequence
3734.5 93.0 4591 6 F12560 3724.5 92.8 4591 10 MUSPP105KB 3156.5 92.8 4591 10 MUSPP105KB 3156.5 78.6 4541 5 GORETINB 2581 64.3 1554 4 AF720742 2555 63.6 2808 5 NVRETINBP 27229 58.0 2730 5 AF70GR284 2129 58.0 2730 5 AF70GR287 772 19.2 344 5 AF7125975 772 19.2 474 5 AF7125975 772 19.2 4750 9 HUMPLO7H 772 19.2 4750 9 HUMPLO7H 773 19.1 25.2 4863 10 MMT3 420 772 19.2 4863 10 MMT3 420 772 19.2 4863 10 MMT3 420 772 19.2 4863 6 AR078257 768 19.0 2808 6 AR078257 769 19.0 2808 6 AR078257 769 18.1 3249 6 115011 727.5 18.2 4853 6 AR0789584 729.5 18.2 4853 6 AR0789584 729.5 18.2 4853 6 AR0789584 729.5 18.2 4853 6 AR0789584 727.5 18.1 3249 6 115011 727.5 18.1 3249 6 12043 727.5 18.1 3249 6 12043	aro — i		97.2	4580	Ş	A01444	A01444 H.sapiens D
3726.5 92.8 4591 10 MOISPPIOSER 3156.5 78.6 4541 5 0.5RETINB 2148 78.4 145.6 5 0.00113 2251 63.6 2808 5 NVRETINBU 2129 58.0 1486 5 APTO2861 2129 58.0 244 5 AVRETINBU 2129 28.0 244 5 AVRETINBU 2129 28.0 244 5 AVRETINBU 2129 28.0 244 5 AVRETING 219.2 4865 10 MMIC2127 220.5 19.2 2460 9 HUMPLO7A AV 220.5 18.2 2483 6 ARCF4225 220.5 18.2 4853 6 ARCF4247 220.5 18.2 4853 6 ARCF9584 220.5 18.1 3249 6 115011 220.5 18.1 3249 6 115011 220.5 18.1 3249 6 120436 220.5 18.1 3249 9 HC034490 220.5 18.1 3249 9 HC034490	J.		0.15	4591	ټ	E12560	Elizher conA eneod
31598.5 92.1 443.2 10 RATIRD 31545.7 92.1 4445.5 10 RATIRD 31449 78.4 445.5 10 RATIRD 2551 64.4 5 10 00.113 2329 58.0 446.5 APTO2861 2329 58.0 274.0 APTO2861 2329 58.0 274.0 APTO2861 2329 58.10 274.0 APTO297 272.5 19.3 4863 10 MMU27177 272.5 19.2 426.5 10 MMU27177 272.5 19.2 426.9 HOMITOZA 272.5 19.2 426.9 HOMITOZA 272.5 19.2 446.9 4 HOMITOZA 272.5 18.2 4863 6 ARCS9584 272.5 18.2 4863 6 ARCS9584 272.5 18.2 4863 6 ARCS9584 272.5 18.2 4863 6 ARCS9584 272.5 18.1 4249 6 12501 272.5 18.1 3249 6 12501 272.5 18.1 3249 6 125436 272.5 18.1 3249 9 HOSR429 H	20	3726.5	92.8	4591	_	MUSPP105RB	M26391 Mouse ret
315.5 78.6 4541 % GORELINB X X 2581, 64.3 % GORELINB X 2581, 64.3 1554 4 A AFZ40742 X 2581, 64.3 1554 4 A AFZ40742 X 2582 65.6 2808 \$ NYRELINBP Y 2252 56.0 2740 \$ APUGL284 A A 10.1 25.2 % GORELINBP X 2129 19.2 3464 10 MMC27177 772.5 19.2 3464 10 MMC37177 772.5 19.2 3450 9 HUMPLO7H 772.5 19.2 3450 9 HUMPLO7H 772.5 19.2 3468 6 ARC78247 7 368 19.0 2808 6 ARC78247 7 368 19.0 2808 6 ARC78247 7 329.5 18.2 4853 6 ARC78247 7 329.5 18.2 4853 6 ARC78287 7 329.5 18.2 4853 6 ARC78287 7 329.5 18.2 349 9 HSP140K X X 27.5 18.1 3249 6 113011 11 327.5 18.1 3249 6 113430 K 3 727.5 18.1 3249 6 113430 K 3 727.5 18.1 3249 6 113430 K 3 727.5 18.1 3249 9 HSPR2P130 K 3 727.5 18.1 3249 6 123430 K 3 727.5 18.1 3249 6 123440 K 3 727.5 18.1 3249 6 123440 K 3 727.5 18.1 3249 6 123440 K 3 727.5 18.1 3249 6 123440 K 3 727.5 18.1 3249 6 123440 K 3 727.5 18.1 3249 6 123440 K 3 727.5 18.1 3249 6 123440 K 3 727.5 18.1 3249 6 123440 K 3 727.5 18.1 3249 6 123440 K 3 727.5 18.1 3249 6 123440 K 3 727.5 18.1 3249 6 123440 K 3 727.5 18.1 3249 6 123440 K 3 727.5 18.1 3249 6 123440 K 3 727.5 18.1 3249 6 1234	7.1	8698	42.1	4432	_	KALKU	D25244 Raffus no
2544 78.4 145.5 5 10.0113 2551 64.3 145.6 5 10.0113 2552 63.6 280.8 5 NVERTINBH 2329 58.0 1446 5 APTO2861 2129 58.0 244 5 APTO2861 2129 58.0 244 5 APTO2861 775.5 19.3 4863 10 MMIZZ177 772.5 19.2 4460 9 HUMPTO74 771 19.2 4460 9 HUMPTO7A 768 19.0 240.8 6 ARCHELZ 768 19.0 240.8 6 ARCHELZ 768 19.0 240.8 6 ARCHELZ 779.5 18.2 4463 6 ARCHELZ 729.5 18.2 4463 6 ARCHELZ 727.5 18.1 3249 6 12013 6 ARCHELZ 727.5 18.1 3249 6 12013 6 ARCHELZ 726 17.6 4461 10 D55627	C1 C1	-	78.6	1757	Ľ,	GDRETINB	X7221H G.domestic
2555 64.3 1554 4 APZ20742 A 2555 61.6 2408 5 MVRETURING P Y 2329 58.0 2740 5 APT02861 A 2525 51.0 2740 5 APT02861 A 2525 51.0 2740 5 APT02807 5	7		78.4	1456	L^	U00114	BOOLLA Gallus qal
2555 63.6 2808 5 NVRRTINBP Y 2255 63.6 2808 6 APTOLOGEN Y 2129 53.0 2730 5 APTOLOGEN Y 2129 53.0 2730 5 APTOLOGEN Y 2129 53.0 2730 5 APTOLOGEN Y 2129 2 3.4 6 APTOLOGEN Y 272.5 19.2 3.45 10 MMT3.420 772 19.2 3.950 9 HUMILIOTH Y 272 19.0 2808 6 ARCHEGA APTOLOGEN Y 229.5 18.2 4853 6 ARCHEGA APTOLOGEN Y 229.5 18.2 4853 6 ARCHEGA APTOLOGEN Y 229.5 18.2 4853 6 ARCHGA APTOLOGEN Y 227.5 18.1 3249 6 113011 11 727.5 18.1 3249 6 113011 11 727.5 18.1 3249 9 HSRR2P130 BR 2727.5 18.1 3249 6 11304 BR 2727.5 18.1 3249 9 HSRR2P130 BR 2727.5 18.1 3249 9 HSRR2P130 BR 2727.5 18.1 3249 9 HSRR2P130 BR 2727.5 18.1 3249 10 1556.27	7		64.3	₹# : (C) (C)	4	AF230742	AF240742 Canis La
2329	5.55		9÷ • •	80 280 780	ď,	NVRETTINE	Y89226 N.viridese
2129 55.0 2740 5 AYOUSZBY 2129 55.0 2740 5 AYOUSZBY 775.5 19.3 4865 10 MMUZ2777 772.5 19.2 4265 10 MMUZ2777 772. 19.2 4265 10 MMUZ2777 773. 19.2 4260 9 HMUT07H 773. 19.0 6 AXZB1827 768 19.0 2408 9 HMUT07A 768 19.0 2408 9 BC04224 761.5 18.2 3448 9 BC04224 729.5 18.2 4853 6 ARCS9584 729.5 18.2 4853 6 ARCS9584 729.5 18.2 4853 6 ARCS9584 729.5 18.2 4853 6 ARCS9584 727.5 18.1 3249 6 125011 727.5 18.1 3249 9 HC034490 706 17.6 4861 10 D55627	97		0.80	- 186	ا ک	AF102861	AFTUZBEL oncorhyn
19.1. 25.2. 4844 G AYLESGYS 772.5. 19.3. 4863. 10 MMT34227 772.5. 19.2. 4960. 9 HMM107H 772. 19.2. 4960. 9 HMM107H 773. 19.2. 4960. 9 HMM107H 763. 19.0. 28408. 6 AXCR1825 763. 19.0. 28408. 6 ARC78225 751.5. 18.2. 4863. 6 ARC78247 729.5. 18.2. 4853. 6 ARC789584 729.5. 18.2. 4853. 6 ARC789584 729.5. 18.2. 4853. 6 ARC789584 727.5. 18.1. 3249. 6 L13011 727.5. 18.1. 3249. 6 L13011 727.5. 18.1. 3249. 9 HSRR2P130 727.5. 18.1. 3249. 9 HSRR2P130 727.5. 18.1. 3249. 9 HSRR2P130 727.5. 18.1. 3249. 9 HSRR2P130 727.5. 18.1. 3249. 9 HSRR2P130 727.5. 18.1. 3249. 9 HSRR2P130 727.5. 18.1. 3249. 9 HSRR2P130 727.5. 18.1. 3249. 9 HSRR2P130 727.5. 18.1. 3249. 9 HSRR2P130 727.5. 18.1. 3249. 9 HSRR2P130 727.5. 18.1. 3249. 9 HSRR2P130 727.5. 18.1. 3249. 9 HSRR2P130 727.5. 18.1. 3249. 9 HSRR2P130 727.5. 18.1. 3249. 9 HSRR2P130 727.5. 18.1. 3249. 9 HSRR2P130 727.5. 18.1. 3249. 9 HSRR2P130 727.5. 18.1. 3249. 9 HSRR2P130 727.5. 18.1. 3249. 9 HSRR2P10	7.7		54.0	2740	u^	AYOURZBY	AYOURZB9 oryzias
772.5 19.4 4865 10 MMT3 42.0 772.5 19.2 4235 10 MMT3 42.0 771 19.2 4136 9 HUMP107H 768 19.0 2808 6 ARCHELZ 761.5 18.7 3403 9 BC0 42.47 721.5 18.2 4853 6 ARCH 897 729.5 18.2 4853 6 ARCH 897 727.5 18.1 3249 6 115011 727.5 18.1 3249 6 129436 727.5 18.1 3249 9 HSCH 201 727.5 18.1 3249 9 HSCH 201 726.17.6 4861 10 D556.27	x: :		74 5 21 6 74 5	4.0	21.	AV125.075	AYLESSES Danio re
72.5 19.2 42.5 10 MM134320 72.1 19.2 4960 9 HUMU107H 73.1 19.2 4130 6 AX2H18.27 76.8 19.1 2408 9 HUMU107A 76.1 19.0 3408 9 BC042247 75.1.5 18.2 3448 9 BC042247 729.5 18.2 4483 6 ARCS9584 729.5 18.2 4483 6 ARCS9584 729.5 18.2 4853 6 ARCS9584 727.5 18.1 3249 6 115011 727.5 18.1 3249 9 HC034490 706 17.6 4461 10 D55627	5.7		T. 0	485	≘.	MMUZZ	UZZIZZ Mus muscu
772 19.2 49.60 9 HBMPL07H 7.1 19.2 49.60 9 HBMPL07H 7.2 19.2 24.80 9 HBMPL07A 7.8 19.0 240.8 9 HBMPL07A 7.8 19.0 240.8 6 ARCH1825 A 7.8 19.0 240.8 6 ARCH1825 A 7.8 18.2 48.8 6 ARCH18697 A 7.29.5 18.2 48.8 6 ARCH18697 A 7.29.5 18.2 48.8 6 ARCH18697 A 7.29.5 18.2 48.8 6 ARCH18697 A 7.29.5 18.1 3.24.9 6 II.3011 II. 3.24.9 6 II. 3.2	⊋ ;		C) -	2) 21 21	<u> </u>	WW03.3.4.2.0	11 (120 Mus musch
7.1 19.2 415.9 6 AXERBEZ AND TELEMENT AND TE	7	- 1	19.2	0968	J.	HUMP107B	1.14812 Human reti
763 19.1 2808 9 HOMPLOVA M 763 19.1 2808 9 HOMPLOVA M 763 19.0 3408 9 BCO42247 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7 7		21 ·	0 : : - :	u:.	AXZRIBE	AXZB1827 Sequence
751.5 19.0 2808 9 500 9247 751.5 19.0 2808 9 507171 729.5 18.2 3448 9 567171 729.5 18.2 4853 6 AR038697 A 729.5 18.2 4853 6 AR039694 A 729.5 18.2 4853 9 HSR130K 727.5 18.1 3249 6 115011 727.5 18.1 3249 9 HSR12P130 A 727.5 18.1 4909 9 HSR12P130 B 727.5 18.1 4909 9 HSR3P130 B 727.5 18.1 4909 9 HSR12P130 B 727.	- :		- C	2808	÷.	HUMP10/A	M/454/ H.Saptens
729.5 18.2 446.9 567171 5729.5 18.2 446.9 567171 5729.5 18.2 485.3 6 AR034697 A 7229.5 18.2 485.3 6 AR059584 A 7229.5 18.2 485.3 6 BR059584 A 7227.5 18.1 324.9 6 113041 1 1324.5 18.1 324.9 6 113041 1 1324.5 18.1 324.9 9 1858125130 X 727.5 18.1 490.9 9 BC034490 B 727.5 18.1 490.9 9 B 727.5 18.1	di 1) t	2808	۵.	AKU/8225	ARO78225 Sequence
729.5 18.2 3448 9 551/1 5 729.5 18.2 4853 6 AR059584 A A 729.5 18.2 4853 6 AR059584 A A 729.5 18.2 4853 6 AR059584 A A 727.5 18.1 3249 6 123436 1 1 3249 6 123436 7 2 2 2 18.1 3249 9 1878129130 X 727.5 18.1 3249 9 1878129130 X 706 17.6 4861 10 155627	Ç :	5.107	\ 0 1 1 1	F 0 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	. .	18(10) 1224 /	14CO 4.224 / Homo sap
729.5 18.2 48.3 6 ARG9869/ A 729.5 18.2 4853 9 HSP19584 A 729.5 18.2 4853 9 HSP1910K	0.0	7.00.	18.2	5.44.04 0.04.04	ъ.	56/1/1	S6/1/1 Rbr 2-reta
729.5 18.2 4853 6 ARN9584 A A 729.5 18.2 4853 6 HSP130K X 727.5 18.1 3249 6 115011 7 27.5 18.1 3249 6 123436 1 1 3249 7 HSR12P130 X 727.5 18.1 4909 9 HSR12P130 X 727.5 18.1 4909 9 HSR2490 HS 706 17.6 4861 10 155627	~ ?	729.5	7.0	4 2 3 3 3 3 3	۰ م	ARU 18697	ARO (8697) Sequence
727.5 18.1 3249 6 115011 1 727.5 18.1 3249 6 115011 1 727.5 18.1 3249 9 1188812P130 X 727.5 18.1 3249 9 188812P130 X 727.5 18.1 4909 9 HO034490 H	no a		20 C	4873 2003	د د	AROSS84	ARO' 9584 Sequence
727.5 18.1 3249 6 115011 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2			20.0	ю С	÷ .	HSP1 40K	X76061 H.sapiens
1 727.5 18.1 3249 6 123436 1 3 727.5 18.1 4909 9 HSRB2P130 X 4 706 17.6 4861 10 1556.27	4. •			3249	۰۹	115011	
2 /27.5 18.1 5249 9 HSRAZP130 X 727.5 18.1 4409 9 HC034490 X 4 706 17.6 4861 10 D55627 B	7 -	5.727		3249	e o	123436	
3 727.5 18.1 4909 9 BC034490 BC 706 17.6 4861 10 D55627	4.4	2.727		5.24.9	<u>ت</u> د	HSRB2P130	X74'94 II sapiens
4 /06 1/.6 4861 10 D5562/		6.777		4409	٠.	HCU 34490	BCO44490 Homo Sap
		706		4861	0	D55627	0556.27 Rattus no

ALIGNMENTS

```
PAT 08-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         080 IGTAATGGACTTCCAGAGGTTGAAAATCTTTGTAAACGATAGGAAAATTTATGTTAAA 1119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1000 GIGAAAAAIGTITATTICAAAAAITIIAIAACCITITAAGAATICICIIGGACIIGIAACA 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                [6] SerAsnGlyLeuProGluValGluAsnLeuSerLysArqTyrGluGluILeTyrLeuLys 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8) tysleuSerProProMetLeulaulysCluProTyrLysThrAlaVallleProlleAsn 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 GluAsuAspThrArgileileGluValLeuCysLysGluHisGluCysAsnIleAspGlu 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            141 Vall.ysAsnVallyrPhcLysAsnPhcTleProPheMetAsnScrLcuGlyLcuValThr 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    201 HeAspertheCluthreInArgThrProArgLysSerAsnLeuAspCluGluValAsn 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    580 ATGICAAGACIGTIGAAGAAGIATGAIGTATIGTITGCACITCTICAGGAAAITGGAAAGG 639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             820 AAAGTGTGAGGTGGGAFGTTGGTGAAAGAACCATATAAAAGAGGTGTTATAGT 879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181 GlySerProArgThrProArgGlyGlnAsnArgSerAlaArgIleAlaLysGlnLeu 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21 ThrCysCluLeuileTyrLeuThrGlnProSerSerSerTleSerThrGluIleAsnSer 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 MetGluAspAspLeuVallleSerPheGlnLeuMetLeuCysValLeuAspTyrPheIle 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MetSerArgLeuLeutysLysTyrAspValLeuPheAlaLeuPheSerLysLeuGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 AsaLysAspLeuAspAlaArqLeuPheLeuAspHisAspLysThrLeuGlnThrAspSer
                                                                                                                                                          Lee, W. H. and Lee, E.Y.-H.P.
Retinoblastoma gene-cancer suppressor and regulator Pater: 98 599814 A 4 67 PEC-1999.
                linear
                                                                                                                                                                                                                                                                                                                                                         Conservative.
                DNA
                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
                                                                                                                                                                                                                                                          808 t
                                                                                                                                                                                                                                                                                                                                       Matches:
        Sequence 4 from patent US 5998134.
AR091965
                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                      38 09-426 459A-37 (1-781) X AR091965 (1-2994)
                                                                                                                                                                                                             Location/Qualifiers
1. .2994
                                                                                                                                                                                                                                             /organism-"unknown"
                                                                                                                                                                                                                                                          594 9
                                                             AR091965.1 CI-10018719
                                                                                                                                                (bases 1 to 2994)
                                                                                                                                                                                                                                                                                                                                                        100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                       4017.00
                                                                                                                                                                                                                                                          618 C
                                                                                                                                                                                                                                                                                                                                                                                      100 008
                                                                                                                             Unclassified
                                                                                                                                                                                                                                                                                                                                                                         Similarity.
                                                                                                                                                                                                                                                         974 a
                                                                                                Unknown.
                                                                                                               Unknown
                                                                                                                                                                                                                                                                                                                                                        Percent Similarity.
                                                                                                                                                                                                                                                                                                            Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                    Ouery Match-
                              DEFINITION
                                             ACCESSION
VERSION
                                                                                                               ORGANISM
                                                                                                                                                                                                                                                          HASE COUNT
                                                                                                                                                               AUTHORS
                                                                                                                                            KEFEKEN'E
                                                                                                                                                                                             TOURKAI
                                                                               KEYWORDS
AR031365
                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                           ż
                                                                                                                                                                            TILLE
                                                                                                                                                                                                                                                                          RIGIN
               2007
                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                           Prod.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>></u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
```

```
1719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1240 GTAATTCCTCCACACACTCCAGTTAGGACTGTTATGAACACTATCCAACAATTAATGATG 1299
                                                                                       1306 AITITAAAI KAASQAAGIGAICAAQCIICAGAAAAI CEGAITIGGIAIIITAACAACTGC 1359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2260 ATTIALGGCATALGCAAAGTGAAGAATALAGAGCTTAAATTGAAAATGATTGTAAGAGCA 2319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                        301 LeuGlyValArgLeuTyTTyrArgValMetGluSerMetLeuLysSerGluGLuGluArg $20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              381 PheTyriysVallleGluSerPhelleLysAlaGluGlyAsnLeuThrArgGluMetille 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421 ProLeuPhcAspLeu!leLysCinScrLysAspArqCiuClyProThrAspHisLeuGlu 440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             441 SerAlaCysProLeuAsnLeuProLeuGinAsnAsnHisThrAlaAlaAspMetTyrLeu 460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      461 SerProValArqSerProLysLysLysGlySerThrThrArgValAsnSerThrAlaAsn 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              581 TyrLysAspLeuProHisAlaValGlnGluThrPheLysArqValLeuIleLysGluGlu 600
                                                          261 ThrValAsnProLysCluSerlleLeuLysArgValLysAspileClyTyrllePhelys
                                                                                                                                                                                                                                                           361 SerGlyThrAspLeuSerPheProTrplleLeuAsnValLeuAsnLeuIysAlaPheAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                  221 ValileProProHisThrProValArgThrValMetAsnThrIleGlnGlnLeuMetMet
                                                                                                                                                                               281 GluLysFheAlaLysAlaValGlyGlnGlyCysValGluIleGlySerGlnArqTyrLyc
                                                                                                                                                                                                                                                                                                                                                            341 AlaCysAlaLeuGluValValMetAlaThrTyrSerArqSerThrSerGlnAssLeuAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1960 TOTOGIGTAAGATOTOPAAAAAAAAAGGTTGAAGTAQGGGTGTAAATTGTACTGGAAAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AlaGluThrGlnAlaThrSerAlaPheGlnThrGlnIysProLeuIysSerThrSerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               521 ArqLeuLeuSerGluHisProGluLeuGluHisIlelleTrpThrLeuPheGluHisThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541 LouGlinAsinGluTyrGluLeuMotArqAspArqHisLeuAspGluTLoMetMotCysSov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    급
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                â
                                                                                                                                                                               Ĝ
                                                                                                                                                                                                                                      0.3
                                                                                                                                                                                                                                                                                                  6
                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \vec{o}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ö.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          급
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
```

```
linear PAT 14-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                   2800 AGTAAACATGTGGGAGGAGAGTGGAAATTTGAGGAGAAAGTGGGAGAAAATGAGTTGTAGT 2859
                                                                                                                                                                                                                                                                                                                                                                     721 ProProLysProLeuLysLysLeuArqFheAspIleGluGlySerAspGluAlaAspGly 740
                                                                                                                                                                                                                                                                                                                                                                                                                         601 GlufyrAspsorffolleVolPhoTyrAsnSorValPhoMorGloArgLeuLysThrAsn 620
                                                                                            621 TheraudhiytAlaSerthrArgProProthrLeuSerProtheProHisTleProArg 540
                                                                                                                                                   641 SerProfytt.ysPheProSerSerProLeuArg11eProGlyGlyAsn11eTyrtleSer 660
                                                                                                                                                                                                      661 ProbedlysSerProTyrLysIleSerGluGlyLeuProThrProThrLysMetThrPro 680
                                                                                                                                                                                                                                                            681 Argser ArgitetzeuVal SerileGlyGtuserPheGlyThr SerGlubysPheGlnbys 700
                                                                                                                                                                                                                                                                                                                 701 HoAsnaluMetValCysAsnSerAspArqValLentysArgSerAlaCluClySerAsn 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26. And the Anglie Office South Special Associated Aspectason ys Gludiu 780
                                                                                                                                                                                                                  Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 2994)
Antelimbar, Gregory, E.J. and Wills, K.N.
Retinobalsstoma tusion polypoptides
Patent: US 6074850 A 3.13 JON-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 3 from patent US 6074850.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5994 bb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /ordanism-"unknown"
618 o Sak q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualitiers
1. .2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AR098189.1 GT:12807446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.46e 296
4017.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unclassitied
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ARU38189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AR098189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Huknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2347 AAA 2422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     781 Lys 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 2
AP)98189
LOTUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         party Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HEFFREN, E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NICIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                         Ś
                                                                                                                    \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                          Ξ
                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                               Ē
                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                 =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                          ÷
                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                   \frac{3}{5}
                                                                                                                                                                                                                                                                                                                 5
```

US 09 026 459A 47 (1 781) X AR098189 (1-2994)

```
.600 GCGTGCGCTCTTGAGGTTGTAATGGCCACATATA3CAGAAGTACATCTCAGAATCTT3AT 1659
                                                                                                                                                                                                                                                                                                                                                                                                                                        1400 ATTTTAAATTGAGGAAGTGATGAAGGTTCAGAAAATGTGATTTGGTATTTAAGAAAGTGG 1459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1360 ACAGIGAATCCAAAAGAAAGTATACTGAAAAGAGTGAAGGATATAGGATATATTITIAAA 1419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120 AATAAAGATCTAGATGCAAGATTATTTTGGATCATGATAAAACTCTTCAGACTGATTCT 1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            760
                                                                                                                   141 VallysAsnValTyrPheLysAsnPhelleProPheMetAsnSerLeuGlyLeuValThr 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 161 SerAsnGlyLeuProGluValGluAsnLeuSerLysArqTyrGluGlulleTyrLeuLys 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    201 IleAspSerPheGluThrGlnArqThrProArqLysSerAsnLeuAsptluGlaValAsn 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40] LeuGlyValAraLeaTgrTyrAraValMetGluSerMetLeuLysSerGluGluGluArq 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361 SerglyThrAspLeuSerPheProTrplleLeuAshValleuAshLeu1;35AlaPheAsp 480
                                                                                                                                                                                                                                                                                                                                                              121 GluasnaspThrarqfletleGluValLeuCysLysGluHisGluCysasnfleAspGlu 140
                                                                                                                                                                                                                                                                                                                                                                              760 ATGGAAGATGATCTGGTGGTTTCATTTCAGTTAATGCTATGTGTCCTTGACTALTTTATT 819
                                                                          61 MetGluAspAspLeuVallleSerPheGluLeuMetLeuGysValLeuAspHyrPhelle 80
1 Met.SerArgleuleulystysTyrAspValleuPbeAlabeuPbeSertystonSTuArg 20
                                                          21 ThrCysGluLeuIleTyrLeuThrGlnProSerSerSerIleSerThrGluIleAsuSer 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           261 ThrValAsnProLysGluSerIleLeuLysArqValLysAspilleGlyTyrileTheLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   321 LeuserileGinAsnPheSerLysLeuLeuAsnAspAsnIlePheHisMetSerLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               341 AlaCysAlaLeuGluValValMetAlaThrTyrSerArgSetThrSerGlnAsnLeuAsp
                                                                                                                                                                                                                                                                                                  101 GlySerProArgThrProArgArgGlyGluAsuArgSerAlaArg1leAlaLysGlnLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 AsnlysAsplouAspAlaArgLeuPheteuAspHisAsplysThrLeuGlnThrAspSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               221 ValileProProHisThrProValArqThrValMetAsnThrIleGlnGeuMetMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                          a
                                                          ò
                                                                                     á
                                                                                                                    ŝ
                                                                                                                                                 q
                                                                                                                                                                               ò
                                                                                                                                                                                                          g
                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                    2
                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                              ें
                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ं
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
```

_	qa ::0	ga -	dy Db	ko da	RESULT 3 AR207831 LOCUS OPFINITI	ACCESSIC VFRSION FRYWORDS SOURCE	ORGANI REFERENC	TITLE LEJENA FEATURES SOU	BASE	Alignmen Pred. No Score:	Best L Ouery DB:	40 - 80 40	ga A	go ;	do .	gg &	Db Oy	oy	q()
		PhetyrcysValifeCluSerPhetleLysAlaGluGlyAsnLeuThrargCluMetric 400	LysHistendluargCysdluffisArgIleMetGluSerLeuAlaTrpLeuSerAspSer 420 	ProLeupheAspLeuIleLysGlnSerLysAspArgGluGlyProThrAspHisLeuGlu 440 	SeraladysProLeudanLeudroLeuglnasnasnHisThralaalaaspwetTyrLeu 460 	SerProValArgSerProfystysClySelySelThrThrArgValAsgSerThrAlaAsn 480	AladioThrGlnAlaThrSerAlaPheGlnThrGlnLysProLeuLysSerThrSerLeu 500	SCT.COFA.C.F. E.S.LySVallyTalaj.coalafytt.coakglcoas.chalcoccyschi 52 	2] ArqueuleuserGluHisProGluLeuGluHisTleTleTrpThrLeuPheGluHisThr 540 	LeuchrasochorycholmerargasparqHisteuaspdinilemether.Cysser 56 	Mettyrctyllecystysvallyskalleaspleubysbelgslictlevaltbrata 580	TyrLysAspLeuProHisAlaValGlnGluThrPheLysArgValLeuIleLysGluGlu 600	GlufyraspSerflefleValPheTyrasnSerValPheMetGlnargLeuLysThrAsn 62 		SerProTyrLysphoproSerSorProLeuArqIloProGlydlyAsnileTyrIleSer 660 	ProLeuLysSerProTyrLyslleSerGluGlyLeuProThrProThrLysMetThrPro 680 	ArgsetargileieuValSetileGiyGluSetPheGiyThrSetGluiysPheGlniys 700 	IleAsurluMetValCysAsuSerAspArqValLcuLysArqSerAlacluGlySerAss	0.14 0.000.000.000.000.000.000.000.000.000.

```
linear PAT 20 JUN-2002
                                                                                                                                                                                                                                                      40 CCICCTAAAACACTGAAAAAAACTACGCTTTGAIAIIGAAGGAICAGAIGAAAGCAGAIGGA 2759
                                                                                41 SeriysHisLouProGlyGluSerLysPhcGlnGlnLysLeuAlaGluMetThrSerThr 7f0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HÜHELLÜHELLÜHELLITILITILITILITILITELLE HELLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81 LysLeuSerProProMetLeuLeuLysGluProTyrLysThrAlaVallleProIleAsn 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01 GlySerProArgThrProArgArgGlyGlnAsnArgSorAlaArglloAlatysGlmteu 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                141 VallycAceValTyrFheLysAsnFhelleFroFheMetAsnSerLeuGlyLeuValThr 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21 ThrCysGluLeuIleTyrLeuThrGlnProSerSerSerIleSerThrGluIleAsnSer 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41 AlaLeuValLeuLysValSerTrplleThrPheLeuCeuAlaLysGlyGluValLeuGln 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MetSerArgLeuLysLysTyrAspValLeuPheAlaLeuPheSerLysLeuGluArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Autélmin.E., Gregory, R.J. and Wills, K.N. Retinoblastoma fusion proteins
Patent. US 6379927-A 3 30-APR-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VN
∷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      809 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2994 bp. 2994 bp. AR207831.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-459A-37 (1-781) x AR207831 (1-2994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="unknown"
. 618 c 593 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR207831.1 GI.21507687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4.46e 296
4017.00
100 n0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 2994)
Autelmin.E., Gregory,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7667.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cal Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      974 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29 AAA 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                     181 Lys 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nt Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             atch.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          urce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N<sub>O</sub>
```

	,				
		HISMETSELLEULEU 340 HITHIHIHIH 159 CATATGETTTATTG 1599 SCEGINASBLEUASP 360 HITHIHIHIH 161 ACCECACATCTTGAT 1659 ACAULYSALABREASP 380 HITHIHIHIHIH 1719 THANGGLUMETTE 400 THINIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIH	420 183 189 460 460 201 500 500		
	The Valasa Protysed asset the length sacgnatures protection and the Valasa Protysed asset the length sacgnatures protection and the length sacgnatures and the length sacgnatures and the length sacgnatures and the length sacgnatures and the length sacgnatures and the length sacgnatures and the length sacgnatures and the length sacgnatures and the length sacgnatures and length sacgnatures are length sacgnatures and length sacgnatures are length sacgnatures and length sacgnatures are length sacgnatures and length sacgnatures are length sacgnatures and length sacgnatures are length sacgnatures and length sacgnatures are length sacgnatures and length sacgnatures are length sacgnatures and length sacgnatures are length sacgnatures and length sacgnatures are length sacgnatures and length sacgnatures are length sacgnatures and length sacgnatures are length sacgnatures and length sacgnatures are length sacgnatures and length sacgnatures are length sacgnatures	FeeSor FeeSinAsinPheSor FeeDouganAspAsin FebbellisMet Sor LeuLeu	LYSHISLOUGH AND GENERAL HOMOT GLUSCH LOUGH I FILLI HILLI		Thr Val Asin Thr Val Asin Thr Val Asin Thr Hellill TTATCCALT TTATCCALT TTATCCALT TATCCALT TATCCALT TATCCALT THE HELLI
1000 161 1060 1180 201 1180 221 1240 1300		\$21 \$41 \$61 \$61 \$61 \$81 \$720	401 1780 421 1840 441 1900 461 2020 501		
8 5 8 5 8 5 8 5 8 5 8	5 4 5 4 5 4	5 8 5 8 5 8 5 8	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$		

```
linear PAT 41-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                           2260 ATGIATGGGATATGCAAAGTGAAGAAIATAGACCIIAAATTCAAAATCATTGTAACAGCA 2419
                                                                                                                                                                                                                                                                                                                                                       2440 AITIIGGASTAIGCIICCACCAGGCCCCCIACCIIGICACAAIACTICACATICCICAA 2499
                                                                                                                                                                                                                                                                                                                                                                                                   2740 CCTCCTAAACCACTGAAAAACTAGGCTTTGATATTGAAGGATGAGATGAAAAAGATGGA 2799
2080 TCACTGTTTATAAAAAAGIGTATCGGCIAGCTATCTGCGGCTAAATACACTTTGTGAA 2139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              56] MetTyrGlyfleCystysVallysAssilcAspleutysPhetysTlelleVallhrAla 580
                                                                                                                                                                                                          581 TyriysAspicuProHisAlaValdInGluthrPhelysArqVallaulletysGludlu 600
                                                                                                                                                                                                                                                                                                                           621 HeleuGlnTyrAlaSerThrArgProProThrLeuSerProHeProHis HeProArg 640
                                                                                                                                                                                                                                                                                                                                                                                     641 SerProTyrLysPheProSerSerProLeuArgllePro61y61yAsnileTyrlleSer 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        681 ArqSerArq11eLeuValSer11eGlyGluSerPheGlyThrSerGluLySPheGlnLys 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   741 SertysHist.cuProGlyGluSertysPheethdintysteuAlactuMet thrserthr 760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              761 ArgThrArdMetGlnLysGlnLysMetAshAspScrMetAspThrSerAshLysGlnDlu 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541 LeuGlnAsnGluTyrGluLeuMetArgAspArqHisLeuAspGlnIleMetMetPysSer
                                                                                                                                                                                                                                                                                                                                           2994 bp DNA linea: Pr
Tissue specific expression of retinoblastoma profein.
HD009728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 2994)
Antelman, D., Gregory, K.J. and Wills, K.N.
Tissue specific expression of relinoblastema protein
Patent. JF 200153638 A 2 21 MAR 2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HP009728.1 GI:18638101
JP 2001503638-A/2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    unidentilied.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      unidentilied
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  unclassitied
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CANJI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2920 AAA 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      781 Lys 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .. RESULT 4
BD009728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                            qq
                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                           δŏ
                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                οÿ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                  ô
```

```
087801092 PT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1900 GIGAAAAAIGTITATITCAAAAAITITAIACCTITIAIGAAITCTCTIGGACTIGIAACA 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1180 ATAGACAGTTTTGAAACACAGAGAAACACCACAAAAAGTAACCTTGATGAAGAGGTGAAT 1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 @luAsnAspThrArqileIleGluValLeuCysLysGluHisGluCysAsnIleAspGlu 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          341 VallysAssuValfyrPheLysAssnPhelleProPheMetAssnSerLeuGlyLeuValThr 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     151 SerAsnGlyLeuProGluValGluAsnLeuSerLysArgTyrGluGluIleTyrLeuLys 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181 AsnlysAspLeuAspAlaArgLeuPheLeuAspHisAspLysThrLeuGlnThrAspSer 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8] LysteuSerBtoProMetLeutautysGluProTyrLysThrAlaValifteProffeAsn 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MZ) AAACTUTCACCTCCCATGTTGCTCAAAGAACCATAAAAACAGCTGTTATACCCCATTAAT 879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8) AIGTCANGACIGTTGAAGGAAGTATGATGTATTGTTTGGACTTTTGAGGAAATTGGAAAGG 639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     640 ACAIGIGAACIIAIAIAIIIGACACAAACCAGAGAGTICGAIAICIACGGAAAIAAAIIGI 699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *! MetGluAspAspLeuVallleSerPheGlnLeuMetLeuCysValLeuAspTyrPheIle 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21 ThrcysdluteulleTyrLeuThrdlnProSerSerSerlleSerThrGlutleAsnSer 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MetSerArgLeuLeuLysLysTyrAspValLeuPheAlaLeuPheSerLysLeuGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41 AlaLeuValLeuLysValSerTrpIleThrPheLeuLeuAlaLysGlyGluValLeuGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOUGLAS ANTELMAN PICHAPP I GPEGOPY, KENNETH N WILLS PC
                                                                             087751517,14-PER-1997 HS
                                                                                                                                                                                                                    /organism-'Unidentitied'.
                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                              CO7H21 04 FORKE ED, ARHF WARDO, AREKES/12
CC Strandedness: Single;
CC Topology: Linear;
FH Key
Location/Qualifier
FH source
Location/Qualifier
FT source
Acquaism-'Unident
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
                                                                                                                                                                                                                                                                                                                        809 t
                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:

    2994
    Zorganism-"unidentified"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (1-2994) x 80009728 (1-2994)
                                                                                                                                                                                                                                                                                               /db_xref-"taxon:32644"
                                                        13-NOV-1997 JP 1998522958
15-NOV-1996 US 08.775151
                                                                                                                                                                                                                                           Location, Onalitiers
                                                                                                                                                                                                                                                                                                                    593 g
                  JP 2001503638-A/2
                                                                                                                                                                                                                                                                                                                                                                                                   1,166.296
4017,00
                                                                                                                                                                                                                                                                                                                                                                                                                                         100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                      618 C
                                       21-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sest Local Similarity:
                                                                                                                                                                                                                                                                                                                      974 a
                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                  Allument Scores:
    2 2 2 2 X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  vuery March:
                                                                                                                                                                                                                                                            SULFRE
                                                                                                                                                                                                                                                                                                                      HASE TINE
                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                   red. Box
COMMENT
                                                                                                                                                                                                                                                                                                                                           RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \frac{1}{2}
```

```
1480 (1109-34) CHARLE CONTROLLE CONT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1360 ACAGIGAATICCAAAAGAAAGIATACTGAAAGAGTGAAGGATATAGGATACATGTTFAAA 1419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1240 GRANTICCICCACACACACTICCAGITAGGACTETTATGAACACTATCCAACAALLAALGAIG 1299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1960 TOTOCTOTAAAAATOTOGAAAAAAAAAGGTTCAACTAGGGGTGTAAATTCTACTGCAAAT 2019
                                                                                                                                                                                                                                               <u> 1600 GCGFCCCFCFFCAGGTFCFAATGGCCACATATAGCAGAAGTACATCTCAGAATGTTGAI 1659</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421 ProceedbeasploatledgsChaSchgsAspargCluClyproThrAspHisterGlu 440 [[[[[[[[[]]]]]]]]]]]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1840 CCTTTATTGATCTTATTAAACAATCAAAGGGGGGGAGAAGGAGAACTGATCACTTGAA 1899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            561 MctTyrCly: lcCysLysValLysAssilcAsplcutysPbcLysilcilcValThrAia 580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301 LeuGlyValArgLeuTyrTyrArgValMetGluSerMetLeuLysSerGluGluGluArg 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       281 GPUSPHPALALYSALAVAIGLYGIGGLYGYSVALGLGILYGGLYSGIGLAKGTYXLYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   261 ThrValAssIrroLysCluSerllcLeuLysArgVallysAspilleGlyTyrillePhelys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               341 AlacysAlaLeuGluValValMetAlaThrTyrSerArqSerThrSerGlnAsnLeuAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    441 SetAlaCysProbeuAsnieuProbeuGinAsnAsnHisThrAlaAlaAspMetTyrLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481 AlaGluThrGlnAlaThrSerAlaPheGlnThrGlnLysProLeuLysSerIhrSerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2020 OPENIN HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI HITTELLI 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2080 PRACEGETETETATAAAAAAGUGTATCGGCTAGCCTATCTCCGGGCTAAATACACTTTGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2260 ATGTATGGGATATGGAAAGTGAAGAATATAGAGGTTTAAATTGAAAATGATTGTAAGAGGA
221 ValileProProHisThrProValArqThrValMetAsnThrIleGlnGlnLeuMetMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361 SerGlyThrAspLeuSerPheProTrplleLeuAsnValLeuAsnLeuLysAlaPheAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       401 LysHisLeuGluArgCysGluHisArgIleMet.GluSerLeuAlaTrpLeuSerAspSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        461 SerProValArqSerProLysLysLysGlySerThrThrArgValAsnSerThrAlaAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  521 ArgLeuLeuSerGluHisProGluLeuGluHisIleileTrpThrLeuPheGluHisThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541 LeuGlnAsnGlufyrGluLeuMetArgAspArgHisLeuAspGlnFleMetMetCysSer
                                                                                                                                                                                                                                                             ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \ddot{c}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ċ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \tilde{Q}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                곀
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  :7
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
```

581 TyrLysAspLeuFroHisAlaValSinSluThrPhelysArqValLeuIleLysGluGlu 600

ö

```
PAT 10-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Shepard, H.Michael, and Wen, S.Fen.
Characterization of a novel anti-pl10.sup.kH monoclonal antibody
Patent: US 5710255-A 2 20-3AN 1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       75). Ang thr Angword Intys Gintys Mort As n As propriet As pith is on As nitys Giugin. 780. Elli Hilli PERTECTION TO THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PERTECT OF THE PER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2560 CONTIGNACIANANATI ICAGANGRICIGECARCACANANANANIONER 2619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2620 AGATCAAGAATCITAGTATCAATTGGTGAATCATTGGGGGACTTCTGAGAAGTTCCAGAAA 2679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2740 COTO TRADACTAGAAAAAGTAGGCTTTGATATTGAAGGTCAGATGAAGGAGGAGTGGA 2799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2800 AGTAAAGATGTGCGGAGAGAGTGGAAATTTGAGCAGAAAGTGGGAGAAATGAGTTGTAGT 2859
                                                                                                                                                                               601 GLUTYTASPSET [1e11eValPheTyrAsnSerValPheMetGlnArgLeuLysThrAsn 620
                                                                                                                                                                                                                                                                                                                                                                                                                      621 ITCLOUGHIPTALaSerThrArqProProThrLeuSerProTleProHisTleProArg 640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       641 SertitolyrLysPheProSerSerProLeuArqTleProGlyGlyAsn11e1yr11eSer 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661 ProLeuLysSerProTyrLysIleSerGluGlyLeuProThrProThrLysMetThrPro 680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      681 ArgSerArgileLeuValSerfleGlyGluSerPheGlyThrSerGluLysPheGlnLys 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       701-11eAssiGlinMetValCysAssiSetAspArqValleuLysArgSetAlaGluGlySetAsn 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721 ProProfysProfeetlysEysLenArqPheAspileGluGlySerAspGluAlaAspGly 740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            741 Sert/gsHist.coProflyGluSert/ysPheGlnGlnLyst.cuAlaGluMet1hrSerThr 760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181465
Sequence 2 from patent US 5710255.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualitiers
1. .2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zorganism="unknown"
618 c 593 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.466-296
4017.00
100.008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181465.1 01:3209762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 2994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unclassitied.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Huknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2920 AAA 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           781 Lys 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alliquiment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Deerly Materia:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PECANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HASE CHINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOHNNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEFEKEN, E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KLYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESSUEL 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181465
Loous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SAURYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;<del>.</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \geq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
```

```
HITHITITE HITHITITE HITHITITE HITTER TAXON TO STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD ST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1300 ATTTTAAATTCAGCAAGIGATCAACCTTCAGAAAATCTGATTTCCTATTTTAACAACTGC 1459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1120 AATAAAGATCTAGATGCAAGATTATTTTTGGATCATGATAAAACTCTTCAGACTGATTCT 1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       201 IleAspSerPheGluThrGlnArqThrProArqLysSerAsnLeuAspGluGluGluValAsn 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301 LeuGlyValArqLeuTyrTyrArqValMetGluSerMetLeuLysSerGluGluGluArq 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        101 GlySerProArqThrProArqArqGlyGluAsnArqSerAlaArqIleAlaLysGluLeu 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 GluAsnAspThrArgilelleGluValLeuCystysGluHisGluCysAsnIleAspGlu 140
                              41 AlaLeuValLeuLysValSerTrplleThrPhelcoLeuAlaLys61ycluValLcu61n 60
                                                                                                                                                                                                                                                                                                                                                                                            1 MetSerArgiculeulystysTyrAspValicuPheAlairuPheSerTysFeuGluArg 20
                                                                                                                                  21 ThrCysCluLeuilleTyrLeuThrGlnProSerSerSerTleSerThrdlailleAsnSer 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   321 LeuSerileGinAsaPheSerLysLeuLeuAsnAspAsnilePheHisMetSerLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                             181 AsniysAspleuAspAlaArgleuPheteuAspHisAsplysThrLeuChilhrAspSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              221 ValileProProHisThrFroValArqThrValMetAsnThrilesHasHashMetMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 261 ThrValAsaProLystlasorfletentysAriVallgrAspflettyffrfittatbetyf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                             â
                                                                                                                                  ô
                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    윤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        급
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
```

361 SerGlythrasplæuserPheProTrpTleLeuasnValLeuasnlænlæspladheAspla00

Š

US 09 026 459A 37 (1 781) x 181465 (1-2994)

Oy 741 Serlyshish Db 2866 AHTAMATAIF OY 761 Arguhrarga Oy 781 Lys 781 Db 2920 AAA 2922 RESULT 6 HUMBSA LOGUS NEFRITON HUMBO RAPH VERSION M28419 VERSION M28419 VERSION M28419 VERSION M28419 VERSION M28419 VERSION M28419 VERSION M28419 VERSION HUMBO SAP ORGANISM HOMO SAP ORGANISM HOMO SAP ORGANISM HOMO SAP ORGANISM HOMO SAP ORGANISM HOMO SAP ORGANISM HOMO SAP ORGANISM HOMO SAP FOR STORY AUTHORS AUTHORS AUTHORS FOR MALL TO SAFET TO SA	HASH COUNT 974 ORIGIN Alignment Scores: Pred. No.: Score:
	3-01 HeAshdinMetValGysAshSerAspArgValLedLysArgSerAlaGluClySerAsh 720 LiftHillHillHillHill LiftHillHillHill LABA ATAAATCAGATGGTAACAGGGCGTCTCTCAAAAGAACTGCTGAACAAAGAAC 721 ProProlysProLedlySLysTeuacqPheAspTlcGluClySerAspCluAlaAspCly LHCHISHHIHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH
8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9	3 5 5

```
2994 bp mRNA linear PRI 12 JUL-1995 etinoblastoma susceptibility protein mKNA, complete (4s.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /LTAINS LATION = "MPPKTPRKTAATAAAAABPPAPPPPPPEBDPBQLSGSPEDLPL
VPLFFFFTFRPDFTALCOK LK TPDIPVBERAWLTWEKVSSVCGVLGGTTGKKKELWGIC
THAAVOLDEMSPTFTELGKWIETSVHKFFNLLKEIDTSTKVDNAMSRLKKYTVLFA
TFSKLEPTGELLYTTOPISSSIFOTF NSALVLKVSWTFPLLAKCEVLOMBINI VI SFOL
MLCVLDYFTKLSPPMLLKEPYKTAV I PINGSPRTPRKGONKSARIAKOLENDIR LEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACKEHTCHTGEVKRYVEKNETEPPMAGAVISNGBEVENGARAYGETATRANDBAR
LELDHDKTLGTDSTDSFETQPTPPKSNLDEEVNVTPPHTPVKTVMNTTGGLMMILNSA
SIQDSENITSYENNOTVNPKESTLKEVKDTGYLFKEKFRARAVAGGVETGS-BYKLGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Shew,J.Y., Hong,F.D., Sery,T.W., Donoso,L.A., Young,L.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RLYYRVMESMLKSEEERLSIQNFSKLLNDNIFHMSLLACALEVVMATYSRSISQNLDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTDLSFPWTLINVINLARFDFYRVTESFTRAEGNLIFRBMTRHLERCEHRTMESLAWLSD
SPLFDLIRGSKDREGPTDHLESAČPI ULPLĀNNHTAADMYI SEVRSPRRKESTT RVNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RVEKRSAEGSNPPKPLKKLRFD1EGSDEADGSKHLPGESKF@0KLAEMTSTRTRMGEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      da, Milanea, Chendata, Chamiata, Vertebrata, Buteleostomi,
a, Butherja, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                       CICCARRANGICAAAIIICAARARAAACISSARAAAIGATICIACI 2859
                                                                                                                                                                                                                                                                                                                                                                                                                                   THEFTER THE CHITCH HITCH CCACTGAAAAAAGTACGCTTTGATATTGAAGGATGAGGTGAAGGAGGA 2799
                                                                                                                            LeuProGlyGluSerLysPheGlnGlnLysLeuAlaGluMetThrSerThr 760
                                                                                                                                                                                                                                                                                                                                                                              MetGlnLysGlnLysMetAsnAspSerMetAspThrSerAsnLysGluGlu 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            shastoma protein; retinoblastoma susceptibility protein,
piens retinoblastoma cDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /map__xp22.32;Vpl1.3"
/map__xp22.32;Vpl1.3"
/cell_line__retinoblastoma cell line Y79, and normal retinoblastoma cell line"
/tlssue_type="retinoblastoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Linoblastoma susceptibility gene encodes a nuclear
protein associated with INA binding activity
329 (6140), 642-645 (1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note-"retinoblastoma suceptibility protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2994
781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xrcf-"CDB:C00-120-184"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start=1
/protein_id="AAA69808.1"
/db_xref="G1:190963"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism "Homo sapiens"
/db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             593 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
1. .2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KMNDSMDTSNKEEK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene "MIC2"
139. .2925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /qene-"MIC2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.46c 296
4017.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   to 2994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:190962
```

		20			30 319	100 479	- 51 m	140 999	ပ္ ဝ	180	200 1179	220 1239	240 1299	260 1359	280	300	320 1539.	340
Conservative: 0 Mismatches: 0 Indels: 0 Gaps: 0	1 - 2494)	Valleuphealateuphesertysteugluarg 2 	ProSerSerSerTheGerThrdTulleAsnSer 4	rPheLeuLeuAlaliysGlyGluValLeuGln 6 	splyrPhelle 8	Teproffeasn 1 	laLysGlnLeu 1 	oaspthratgileilegiuvalleucystysgiuffisciucysasuileaspgiu le ELELLIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Tyteuvalthr 1 	leTyrLeuLys 1 TTATCTTAAA 1	herbraspsor 2 	roArdLysSerAshLeuAspCluCluValAsh 2 	ValMetAsnThrIledinGluLeuMetMet 2	erGubasuleulleSetTyrbteAsaasuCys 2 	ysarqvallysaspiledlytyrilephelys 2 		**************************************	LeutsuAsnAspAsnitePheHisMetSerLeuten 3
imilarity; 100,00% 1 Similarity: 100,00% ch: 9	459A 37 (1 741) x HUMRBSA (et Ser Argheulten (481.9819) Asp [Tyrteuth	2 - 2	Met GludspaspasuVallleSerPheGl 	Lysteuser ProfroMet Leuteutys 	GLYSer ProArgThr ProArgAndCly [111111111111111111111111111111111111	GluAsbAspFhrArgiloileGluVal HIIIII HIIIIII HIIII GAAAAIGAAGTA	VallysashvallyrPholysashPho HTELLHTHHHHHHHHHHH GEBAAAAEGEFFA	Ser AsnellyLeuProchuValGluAsn 	Ashtysaspronaspalantorophor 	Heaspsorphodiuthrdhaithill Heleffill Hillill Hillill Alabadagilligaacadagadadaga	ValiteProprofisithrProValargThr 	9 – 5	rotyschuser Hebeu EEEEEEEEEEEEE CAAAAAAAGIAIACIG	aVale1y6 	a qizatiyi iyi ArqVa Tillili i bililili SCTTGTATTAGGGAGT	teuser HeGlinAsiiPheser Lysten 11841111111111111111111111
rent s Locus X K at	03-026	- 08%	21	4.1	6.1	820	1 0 mm	121	141	16.1	141	201	221	24.1	26.1	281 1420	1480	421
77.77 77.87 1980 1980	0 22	5 2	25	5 3	5 3	45	5 2	\$ B	35 E	5 3	5 ±	5 3	5 3	5 3	25 5	5 3	5 ±	5

```
501.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2560 CCCCTGAAGAGTCCATATAAAATTTCAGAAGGTCTGCCAACACGAACAAAAATGACTA 2619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       900 TOTACTICITATION FOR CONCINENCIAL CONTRACTOR CONTRACTOR TO 1959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PHILLEOTIACAAGITICCTAGITCACCCTTACGAATTCTGGAAGAAAAATTCTATATTTCA
1540 THATCCALICAAAATTI FAGCAAAGTICIGAALGACAATH FICALAHARCH FATHG 1599
                                                                                                                                                                                                                                                                                                                                                             840 CCTTTATTGATCTTATTAAACAATCAAAGGACCGAGAAGGACAACTGATCACCTTGAA 1899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   020 GCAGAGACACAACCAACCTCAGCCTTCCAGACCCAGAACCATTGAAAT TACTTCTCTT 2079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661 ProteutysSerProfyrLysTleSerGluGlyLenProthrProthrLysMetThrPro 680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    681 ArgSerArd11eLeuValSer11eGlyGluSerPheGlyThrSerGluLysPheGlHLys 700
                                                                                                                                                                                                    381 PhetyrLysVallleGluSerPhelleLysAlaGluGlyAsnLeuThAraduMetille 400
                                                                                                                                                                                                                                                                                 401 LysHisLeuGluArqCysGluHisArqIleMetGluSerLeuAlaTrpLeuSerAspSer 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              501 SerLeuPheTyrLysLysValTyrArqLeuAlaTyrLeuArqLeuAsuThrLeuPysGlu 520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      561 MetTyrGlylleCysLysValLysAsnIleAspLeuLysFheLysIleIleValThrAla 580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       581 TyrLysAspLeuProHisAlaValGluGluThrPheLysArqValLeuIleLysGluGlu 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   621 IleLeuGlnTyrAlaSerThrArqProProThrLeuSerProIleProHisileProArq 640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              461 SerProValArgSerProLysLysLysClySerThrThrArdValAsnSerThrAldAsn 480
                                                                                                                     SerG1yThrAspticuSerPheProTrp1TeLetanAshValLeuAshLeu1ysAlarheAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                               441 SerAlaCysProLeuAsnLeuProLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2200 CIGCAGAATGAGIAISAACICAIGAGAGACAACAIIIGGAGGAAAIIAIGAIGIGIGITGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2380 GAGTATGATTCTATTATAGTATTCTATAACTCGGTCTCTCATGCAGACACTCAAAAAT
                                      341 AlacysAlaLeuGluValValMetAlaThrTyrSerAruSerThrSerGlnAsnLeuAsp
                                                                            600 GCGTGCGCTCTTGAGGTTGTAATGGCCACATATAGAAAGTACAAAATCTTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1960 TCTCCTGTAAGATCTCCAAAGAAAAAGGTTCAACTACGCGTGTAAATTCTACTGCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481 AlaGluThrCinAlaThrSerAlaPheClnIhrGlnLysProLeuLysSerThrSerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601 GluTyrAspSerllelleValPheTyrAsnSerValPheMetGluArgLeuLysThrAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    641 SerProTyrLysPheProSerSerProLeuArqIleProxlydlyAsuIleTyiIleSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             521 ArgLeuLeuSerGluHisProGluLeuGluHisIlelleTrpThrLeuPheGluHisThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541 LeuGlnAsnGluTyrGluLeuMetArqAspArqHisLeuAspGlnIleMetMetCysSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             â
                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \stackrel{\sim}{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뎦
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
```

```
linear PAT 18 FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 3232)
Xu.H.-J., Hu.S.-X. and Benedict,W.F.
Broad spectrum tumor suppressor genes were products and methods for
tumor suppressor gene threap partners or $73224-a.i.s.un.1999.
                                                                                                                                                                                                                2210 CCCCIARAGCACTGAAAAAATAACTTTTTTTTTTTTTAAGSATGAGATGAAGGAGAGA 2799
                                                                  7.1 ProfrospatroscaliystystydappeakspitantaffysanAspituAtaAspitty 746
7.11 (LoasinGlametValOysAssSerAsparaValLesigsArgSerAlaGlaGlgSerAsin 729
                                                                                                                                           741 SerLysHisLeuFroGlydlaSerLysFhaGlnGlnLysLeuAlaGluMetThrSerThr 760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81 IystaqSarProProMettauFattysGiuProTyrLysThrAlaValIleProIleAsn 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       124 ATGLICARGACTGTLIGARGARGTATGALGTATTGTTTTGCACTCTTCAGCAARTTGGAAAGG 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              244 GCATTGGTGGTAGTTAAAAGTTTGGATCACATTTTTATTAGCTAAAGGGGAAGGTATTACAA 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1-1 OlyserProArgThrProArgArgGlyGlnAsnArgSerAlaArg1leAlaLysGlnLeu 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4) AlaLeuValLeuLysValSerTrp[]eThrPheLeuLeuAlaLysG[yG]uValLeuGIn 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 MetGluAspAspLeuVallleSerPheGlnLeuMetLeuCysValLeuAspTyrPheTle 80
                                                                                                                                                                                28-00 ABIBABOAICICOCAGGAGAGIFOFAATIIFOAGGAAAATIGGGAAAAAGAOFIGTIAGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21 ThrCysGluLeuIleTyrLeuThrGlnProSerSerSerIleSerThrGluIleAsnSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             781
0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                      D'A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
                                                                                                                                                                                                                                                                                                                                                                                                  AR072031 3232 kp. Sequence 1 from patent US 5912236. AR072031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           is jubul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IS-09 026-459A-37 (1-781) x AR072031 (1-3232)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Jocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism-"unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR072941.1 GI:7222919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 440 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4017.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           597 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fercent Similarity:
Sest Local Similarity:
Local Martch:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1086 а
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown.
                                                                                                                                                                                                                                                                                                                               2920 AAA 2922
                                                                                                                                                                                                                                                                                         741 1ys 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Actignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                     LEFTN: LESN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CRUANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ASE CHINT
                                                                                                                                                                                                                                                                                                                                                                                                                                        A CESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JORNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEVWODOS
                                                                                                                                                                                                                                                                                                                                                                 PESCIL: 7
                                                                                                                                                                                                                                                                                                                                                                                 AR072041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rred. h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SCOFE
                                                                                                                                                                                                                                                                                                                                                                                                  3000
                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                    \hat{\Xi}
                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ź
```

```
1084 ITATCCATTCAAAATTTTAGCAAACTTCTGAATGACAACATTTTTCATATGTCTTTATTG 1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1144 GOGTGOGGTGATTGAGGTGAGGCCACATATAGCAGAAGTACATCTCAGAATCTTGAT 1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1384 CCTTTATTTGATCTTATTAAACAATCAAAGGACCGAGAAGGACCAACTGATCACCTTGAA 1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1324 AAAGATTTAGAAGGATGTGAAGGTGGGAATGGGAATGGGTTGGATGGGTTGTGAGATTGA 1383
                                                                                             SerProValargSerProLysLysLysClySerThrThrargValasuSerThrAlaAsu 480
                                      221 ValidebrorodisThribroValArgibrValMetAssihrileGinGinLeumetMet 240
                                                                                                                                                                                                                                                                                                                                                                                                                  ₹05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 281 GlotystheAlatysAlaVa1GlySluGlySyAJGlutleSlySevSluAtatyrtys 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301 LeuGlyValArqLeuTyrTyrArqValMetGluSerMetLeuLysSerGluGluGluAra 320
                                                                                                                          544 GIGAAAAAIGIITAIIICAAAAAIITIAIACCIIIIAIGAAIICICIIGGACIIGIAACA 603
                                                                                                                                                                                                                                                                     201 The Asp Set Phe Glurb GluArg Thi ProArg Lysser Asideu Asp GluGluVal Asn 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        261 ThrValAspProLysGluSerIleLeuLysArgValLysAspIleGlyTyrllePheLys
                                                     181 AsnLysAspLeuAspAlaArgLeuPheLeuAspHisAspLysThrLeuGlnThrAspSer
                                                                                                                                                                                                                                                                                                                                                       784 GIAATICCICCACACACICCAGIIAGGACIGIIAIGAACACIAICCAACAAIIAATGAIG
                                                                                                                                                                                                                                                                                                                                                                                                               844 ATTTTAAATTCAGCAAGTGATCAACCTTCAGAAATCTGATTTCCTATTTTAACAACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    341 AlaGysAlaLeuGleValValMetAlaThrTyrSerArqSerThrSerGlnAshLeuAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    381 PheTyrtysvalileCluSerPhetletysAlaCluClyAshLeufhrArgGluMetile
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           401 lysHistenGluArgCysGluHisArgIleMetGluSerLeuAlaTrpLeuSerAspSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        441 SerAlaCysProLeuAsnLeuProLeuGinAsnAsnHisThrAlaAlaASpMetlyrLeu
                                        E4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .č.
                                      ä
                                                                                               ੋਂ
                                                                                                                        ij
                                                                                                                                                     õ
                                                                                                                                                                                                             ë
                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                   ^{\circ}_{Y}
                                                                                                                                                                                                                                                                                              P
                                                                                                                                                                                                                                                                                                                          \tilde{c}
                                                                                                                                                                                                                                                                                                                                                       \Gammap
                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                            αď
                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     켵.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           {\mathbb G}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Çı,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

04 (CTCCTGTAAGATCTGGAAAGAAAA 64 (A NAGAGAYACAGAAAAAA 65 (A NAGAGAYACAGAAAAAGTTTTTTTTTTTTTTTTTTTTTTTT	AAGATCTCCAAAGAAAAAGGTTCAACTAGGGGTGTAAAFTGTAGTGCAAAT 1563	AladloffurdinalathrserAlaPheGluffurdinLysProteutysSerfurserteu 500 FIFTELLITELLITELLITELLITELLITELLITELLITE	SetLeutherpripstysvatypraticialityricoalityricoarigicouspicius 520 HIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Ardreuteusergluttistroglutzengluttistlettetrpthrizeupheglutisthr 540 Eillittistetritation goggischengragagaattagaacatateatetgeacettiscageacaee 1744	LeudhnAsnoturyrdalaeuMetArqAspArqHisLeuAspGln1LeMetMetGysSer 560 	MettyrdtyttecystysvaltysasnifeasptentysPhetysTtetfeVaithrala 580 	Fyttysdaptzetradaðaldinglathrebetysdagðaltætiletystjági (gg fillititit ettillitit tillititititititititititititit	chutyraspseritethevathretyrasservathremetcharquesiysthrasn 629 Hittiffittittittittittittittittittittitti	THE LANGIAGE AND ASSOCIATED FOR THE PROPERTIES OF PROPERTIES THE PROPERTIES OF THE PROPERTIES OF THE PROPERTIES OF THE PROPERTY OF THE PROPERT	Set ProfytigsPheProSet SetProLegArgileProfilgs) yashilefyrileSet 660 	Profesilyasertrolyatystieseratualyieserarrikrikrotaatysmetarrik eso 111111111111111111111111111111111111	Argeraryllelenvalserilestystuserphesiythrserclulysphesinlys 790 	TIPASEGIAMETVATOYSASEGSPASPARGVALLOULYSARGSPRALAGIUGLYSGRASA 720 ITTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTEL ATAAALGAGAGGIALGTAAGAGGGGGGGGGGGGGGGGGGG	ProbrotypeProtocitypipotecaraFhoaspilodiaglyseracpdi.alaaspgly 746 	Sert ystistrabrootyd usertyschod ind nijystena Lad umet ihrserthr 760 i i i i i i i i i i i i i i i i i i i	Argthrargmet Glalys Glalys Met AsaaspSermetaspThrserasilys Gluglu. 780 1111 1111 1111 1111 1111 1111 1111 11		3232 hp DNA linear PAT 18 FEB 2000 US 5912236.
- 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	504 ECLOTEGIAAGAICTICCAAAGAAA		501 SerticuthetyrtystysV4P77 		~ 4								→ ₹				2,7 2,4 4,4 4,4 4,4 4,4 4,4 4,4 4,4 4,4 4,4	2 from pate:

```
Broad-spectrum tumor suppressor genes gene products and methods tor
                                                                                                                                                                                                                                                                                                                                                                          81 LysLeuSerProProMctLeuLeuLysGluProTyrLysThrAlaValileProIleAsn 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        141 VallysAsnValTyrPbelysAsnPhelleProPheMetAsnSerLaud|yLauValThr 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161 SerAsnGlyLeuProGluValGluAsnLeuSerLysArqTyrGluGlulleTyrLeuLys 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 AsnlysAspLeuAspAlaArgLeuPheLeuAspHisAspLysThrLeuGluThrAspSer 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      201 IleAspSerPheGlaThrGlnArqThrProArqLysSerAsnLeaAspGlaGlaGlaValAsn 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24) HeteuAsnSerAlaSerAspClnProSerGluAsnLevilleSerTyrPheAsnAsnCys 260
                                                                                                                                                                                                                                                                                                                              21 ThrCysGluLeuIleTyrLeuThrGlnProSerSerSerIleSerThrGluIleAsnSer 40
                                                                                                                                                                                                                                                                                1 Met Ser Arg Leutleut getyr Lystyr AspVall Leuthe Alakeuthe Ser Lystand lu Ara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     221 ValileProProffisThrProValArqThrValMetAsuThrIleGlnGlnLeuMetMet
                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
                                                                                                                                                                                                         Mismatches:
                                                                                                                      597 q 1086 t
                        1 (bases 1 to 4242)
Xu,H.-J., Hu,S.:X. and Benedict,W.F.
                                                            tumor suppressor gene therapy
Patent: US 5912236-A 2 15-JUN 1999;
                                                                                                                                                                                                                    indels:
                                                                                                                                                                                                                                                       US 09 026-459A-37 (1-781) x AR072032 (1 4242)
                                                                                                                                                                                                                                  Gaps:
                                                                                    Location/Qualitiers
                                                                                               1. .4242
/orqanism-"unknown"
                                                                                                                                                                      4.946-296
4017.00
100.008
100.008
                                                                                                                        566
            Unclassitied.
                                                                                                                                                                                                         Best Loral Similarity:
                                                                                                                     983 a
Unknown.
                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                          Aliqument Scores:
                                                                                                                                                                                                                     Query Match:
 ORGANISM
                                                                                                                        BASE COUNT
                        REFERENCE
                                     AUTHORS
                                                                       JOURNAL.
                                                                                    FEATURES
                                                TITLE
                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90
                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                    G
                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>2</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ^{\circ}_{Y}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ನೆ
                                                                                                                                                                                                                                                                                ें
                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
```

4 4	4 +		4 4	4		4 4	-			
C 233. C 233. S 280 A 227.	0 0 6 0	u 340 	p 380 1 197. 197. 	44	- 4 -	1 480 1 167 1 500 1 161	u 520 520 1554 540 1	: 1494 r 560 l 1434	a 560 	1 600 3 131 1 620
ATTITION TO A SECOND TO A SECO	CONTROLLE CONTRO	rLeule 	SCTOLY THE ASPICUSCREPTOFT PURCHASINALIC ASSILLAND BEAS INTERNATIONAL TOTAL SCREEN STATEMENT ASSILLAND BEAS INTERNATIONAL TOTAL SCREEN STATEMENT ASSILLAND BEAS INTERNATIONAL TOTAL SCREEN STATEMENT SCREEN STATEMENT STATEMENT SCREEN STATEMENT STATEMENT SCREEN STATEMENT STATEMEN	LyshisteuGludrgCysGludisdrgfleMetGluSerieudlafrpleuSerdspSeliff[]	SETTIATT TO THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE SET AT THE PROPERTY OF SET AT THE PROPERTY OF	Seritoval Argseritoiystystystystythithithithithithithithithithithithithit	SerlenPheTyrLysLysValTyrAraLeuAlaTyrLeuArgLeuArgLeuAanThrLeuCysGl [] [] [] [] [] [] [] [] [] [] [] [] [] [Cys Cys IIII	MettyrdylledyslysvalbysAsilleAspleubysPhelyslleileVailhrAl 	TACA TACA
2393 261 2833	2273	421 2154 341 2 1 4	361 2033 381 1973	5 - N	1343	461 2733 481 1673		1554 541 1493	561	581 1373 601
유 참 유 R	3 8 8 <u>8</u>	\$ 2 \$ 3	\$ £ \$ £	5 5 5	ž 5 <u>ž</u>	8 8 8	à <u>\$</u> 5	중 중 물	5 £	\$ 4 \$

```
linear PAT 07-001-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Xu, H.-J., Hu,S.-X. and Benedict, W.F.
Broad-spectrum tumor suppressor genes, gene products and methods
for tumor suppressor gene therapy
Patent: US 5496731-A 1 03-MAR-1996;
                                          1313 GAGTATGATTCTATTATAGTATTCTATAACTCGGTCTTCATGCAGAGGTGAAAACAAA! 1254
                                                                                                1133 COCCTGAAGACTOCATATAAAATTTCAGAAGGICTGCCAACAACAACAAAAALGACTCCA 1074
                                                                                                                                                                                                             1073 AGATCAAGAATCTTAGTATCAATTGGGGAATCATTGGGGGACTTCTGGAGAAGTTCGAGAAA 1014
                                                                                                                                        661 ProLeuLysserFrcTyrLyslleSerGluGlyLeuFroThrProThLLysMctThrFro 680
                                                                                                                                                                                                                                                   721 ProProLysFroLeuLysLysLeuArqPheAspileGluGlySerAspGluAlaAspGly 740
                                                                                                                                                                                                                                                                                                                                                                                                                    621 IleLeuGloTyrAlaSerIhrArqProProThrLeuSerFroIleFroHisIleProArg 640
                                                                                                                                                                                                                                                                                                                         741 SerLysHisLeuProGlyGluSerLysPheGlnGlnLysLeuAlaGluMetThrSerThr 760
                                                                                                                                                                                                                                                                                                                                                                              641 SerProTyrLysPheProSerSerProLeuArgIleProGlyGlyAsnIleTyllleSer
                                                                                                                                                                                             681 ArgSerArgIleLeuValSerIleGlyGluSerPheGlyThrSerGluLysPheGlnLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ONA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3232 bp
Sequence 1 from patent US 5496731.
118496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-026-459A-27 (1-781) x (18496 (1 3232)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="unknown"
597 c 566 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.936-296
4017.00
100.008
100.008
100.008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 118496.1 G1:1598851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 3232)
Xu, H.-J., Hu, S.-X. ar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .3232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1086 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            781 Lys 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      773 AAA 771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            I18496
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                          ₹.
                                                                                                                                      .
ζο
.
                           0.7
                                                    qq
                                                                                  οy
                                                                                                                                                                  qu
                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                               å
                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ó
                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                 ò
```

21 184 41 41 61 61	1 ThreyschuloulleTyrLouThrelnDroSerSerTleSerThrelulleAsnSer 40	40 243 60 303 80
AA - 1.5%	ppaagatgatergitgatergeferegetraatgerategegegegeferftagg stoolseeferopromot toutoolseginprofyritysthralavaliteefolleasn etteregeregereitertettertettittettettette	36.3 100 42.3
2 = 3 = 5	ySorProArgibitroArgArgCiyGinAsnArgSorAlaArgiicalaiySGinLou 	120 ,
F=5 3=5	AASAA PERANGAN TERTIFORMAN SANGAN SANGAN PERANGHAN BENTAMBER INTERNAL AAA ISTAAN TERTIFORMAN SANGAN SANGAN SANGAN TERTIFORMAN AAA ISTAAN TERTIFORMAN SANGAN	140 543 160 603
A = 2 ×	r Asind) y Legizt of Luva to Luash Leusert iysa ryffyrof Luothi Feryr Leutys 1111 11	180 663 200
= 4 = = 4	LITTITITITITITITITITITITITITITITITITITI	723 220 783
> - b <		240 843 260
∓ ∷ ∓	OTTOWN FOR SPOTON CANCELL CONTRACTOR TO THE CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CANADA CONTR	363 363
· · · · · · · · · · · · · · · · · · ·		300
≛ = €	eeli yyahardiootyytyi arayalmordiosormettoiiiysserdiodiodioarg TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	\$20 1083
<u> </u>	«Gert FedinasnPheSertystæubeuasnaspasnTlePhellisMetSerbeubeu HTTLLLTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	340
< − ∵	Tar'ysATatouGTuVaTWaTMeTATaThrTyrSerArgSerThrSerGTuAsnLouAsp TTT-TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	360 1203
ž — =	**POLYTHE ASPLANDSOFPHOPFOLEPH OLONASHVA HENASHLANDLYSALAPHOASP FELLET FELLET FERAAGGCCCTT GATE FELLET FELL	380
Ξ	wTyrtysVallleGluSefPhelleLysAlaGluGlyASnLeuThrArqGluMetIlle	400

```
1100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1624 TCACTGTTTTATAAAAAGTGTATCGGCTAGCCTATCTCCGGCTAAATACACTTTGTGAA 1683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1684 GGCCTTCTGTGTGAGCACCCAGAATIAGAACAIATCATCTGGACCCTTTTCCAGCACACAC 1743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1984 ATTIGGAGIARGGIIGGAGGAGGCCCCCIACCIIGICA CAALACCICACALICCICGA 2043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2104 CCCCTGAAGAGTCCATATAAAA111CAGAAGGTCTGCCAACACACAAAAA1GAGTCCA 2163
                                                                                                                                                                                                     1324 AAACATTTAGAACGATGTGAACATCGAAATGATGGAAATGCTTGCAAGGGCTCTCAGAATTCA 1383
                                                                                                                                                                                                                                                                                                                                                                        1384 CCFFFTATTTFGATCFTFATTAAACAATCAAAGGACCGAGAAGGACCAACTGATCACTTGAA 1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R64 TACAAGGATOTTOOTGATGTGTTCAGGAGACATTCAAGGGTGTTTTGAFCAAAGAAGAG 1923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2164 AGATCAAGAATCTTAGTAFCAATTGGTGAATCGTTCGGGGACTTCTGAGAAGTTCTAGAAA 2223
421 ProLeuPheAspLeulleLysGlnSerLysAspArqGluGlyProThrAspHisLeuGlu 440
                                                                                                                                                                                                                                                                                                                                                                                                                                                           441 SerAlaCysProLeuAsnLeuProLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeu 460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               561 MetTyrGlyIleCysLysValLysAsnIleAspLeuLysPheLysIleIleValThrAla 580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                581 TyrLysAspteuProHisAlaValGlnGluThrPheLysArqValLeuTleLysGluGlu 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601 GluTyrAspSerIleIleValPheTyrAsnSerValPheMetGlnArqLeuLysThrAsn 620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          621 IleLeuGlnTyrAlaSerThrArqProProThrLeuSerProIleProHisIleProArq 640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            641 SerProTyrtysPheProSerSerProteuArq11ePro61y61yAsiilleTyrlleSer 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661 ProLeulysSerProTyrLyslleSerGluGlyLeuProThrProThrLysMetThrPro 680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           70) HeAsnGluMetValCysAsnSerAspArqValLenLysArqSerAlaGluGlySerAsn 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2224 ATANATCANATGGTATSTANCANNANGSTGTGTGTGAAAAAAGGGGTGAAAGAAA, AAC 2284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         401 LysHisLeuGluArqCysGluHisArqIleMetGluSerLeuAlaIrpLeuSerAspSer 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      681 ArqSerArqIleLeuValSerIleGlyGluSerPheGlyThrSerGluLysPheGlnLys 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       721 ProProLysProLouLysLysLeuArqPheAspIleGluGlySetAspGluAlaAspGly 740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481 AlaGluThrGlnAlaThrSerAlaPheGlnThrGlnLysProLeuLysSerThrSerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  461 SerProValArqSerProLysLysLysClySerThrThrArqValAsnSerThrAdAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 521 ArgleuleuSerGluHisProGluLeuGluHisllelleTrpThrLeuPheGluHisThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541 LeuGlmAsnGluTyrGluLeuMetArqAspArqHisLeuAspGlmlleMetMetCysSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ю
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q:
                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \stackrel{\wedge}{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ^{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
```

```
PAT 07-021-1996
                                                                                                                                                                                                                                                                                                                                                                                                            gene products and methods
2633 GEGAAAAA IGTTEATTTCAAAAATTTTATACCTTTTTATGAATTCTCTTGGACTTGTAACA 2634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15.3 ACATGLGAAGTTAFAFYFFGACGAGCGAGCAGTTGGATATGTAGTGAAATAAATFFCF 2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2993 GCATTESTESTANAAGITISTESTESTACATITITAITAGSTAAAGGGGAAGIAITACAA 2934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2753 GAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATATACATGAG 2694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 CHUASHASPIHTATGILETTEGTUVALLEUCYSLYSGTURISGTUCYSASHILEASPGTU 140
                                  751 ArgThrArdMetGlnLysOlnLysMetAsnAspSerMetAspThrSerAshLysGluGlu 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81 LysfeusorProProMettententysGluProTyrLysThrAlaValIleProTleAsn 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   151 GiyserProArgThrProArgArgGlyGlnAsnArgSerAlaArg11eAlaLysGlnLeu 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  141 VallysAssuValTyrPheLysAsspHeIleProPheMetAssSerLeuGlyLeuValThr 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ] Met.SerArg.coll.coll.ys?yyrAspVa?LosPhcAlal.colPhcScrLysLouC;uArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21 Thr/ysgluteutletyrLeuThrdluProSerSerSertleSerThrGlutleAsnSer 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 MetGluAspAspLeuVallleSerPheGlnLeuMetLeuCysValLeuAspTyrPhelle 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lingar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
Conservative:
                                                                                                                                                                                                                           N'C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                          Broad spectrum tumor suppressor genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1086 t
                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 3242)
Xu,H.J., Hu,S.-X. and Benedict,W.F.
                                                                                                                                                                                                                   3232 hp.
Sequence 2 from patent US 5496731.
I18497
                                                                                                                                                                                                                                                                                                                                                                                                                           for tumor suppressor done therapy bythmes of $19478 a 2 of MAP 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OB 026-459A-47 (1-781) x I18497 (1-3232)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism-"unknown"
566 c 547 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.93e-296
4017.00
100.00%
                                                                                                                                                                                                                                                                             I18497.1 GI:1598852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .3232
                                                                                                                                                                                                                                                                                                                                                       Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      best total Similarity:
                                                                                                                                                                                                                                                                                                                    Unknown
                                                                                                                                                                                                                                                                                                                                      Unknows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percen' Similarity:
                                                                                                                                                 2464 AAA 2466
                                                                                                            781 Lys 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A. i-mmer.t Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mory Match.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SULFOR
                                                                                                                                                                                                                                        ACESSION A
                                                                                                                                                                                                                                                                                                                                    ORCAN; SM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                    RESULT 10
                                                                                                                                                                                                                                                                                             KEYW PLA
                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                               THE PARTY OF
                                                                                                                                                                                                      118497/0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEALER S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Presd. 45
                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                             VERSI N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N [ ] N
                                                                                                                                                                                                                         -(0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
```

```
2453 GTAAITCCICCACACACACAGIIAGGACIGIIAIGAACACIATCCAACAATAAIGAIG 2494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2633 TOTAATGGAOTTOONGAGGIIGAAAAICITICIAAAOGAIACGAAGAAAITIAICIIAAA 2574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2273 GAGAMATITGCIAMAGCIGIGGACAGGGITGTGTGGAMATIGGATCACAGGGAIACAAA 2214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1973 TITIACAAAGTGAAAGTITIAICAAAGGAAAGGAACTTGACAAGAGAAATGAIA 1914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1853 OCTITATITICATCITALTAAACAALCAAAGGACCGAGAAGGACCAACLGATCACCTIGAA 1794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1793 TOTGCTTGTOTGTTAATCTTGTGTGTGTGAAATAATGAGAGGAGGAGGAGATATGTATCTT 1734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1733 TCTCCTGTAAGATCTCCAAAGAAAAAAGGTT@AACTACGCGTGTAAATTCTACTGCAAAT 1674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1613 TCACTGITITATAAAAAGFGFATOGGCFAGOTAATCTGCGGCTAAATACACTTTGTGAA 1554
ScrAsnClyt.cuProGluValGluAsnLcuScrI;ysArgTyrCluGlsHGTyrI.cuI,ys 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301 LevelyValArqLevTyrTyrArqValMetSluSerMetLeuLysSerSluGluSluArq 2.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                381 PheTyrtysVallleGluSerFheiletysAlaGluGlyAsnLeuThrAraGluMet.lle 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  461 SerProValArgSerProLysLysLysLySLySerThrThrArqValAsnSerThrAlaAsn 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SerLeuPheTyrLysLysValTyrArgLeuAlaTyrLeuArgLeuAcmThrLeuCysClu 520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         401 LysHisLeuCluArgCysCluHisArgIlcMctCluSerLeuAlaTrpLeuSerAspSer 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProLeuPheAspLeuIleLysGlnSerLysAspArgGluGlyProThrAspHisLeuGlu 440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SeralaCysProLeuAsnLeuProLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeu 460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             521 ArgieoleoSerGloHisProGloLeoGloHisHelleTeTrpThrLouPbeGloHisHr 540
                                                                                      241 IleLeuAsnSerAlaSerAspGlnProSerGluAsnLeuIleSerTyrPheAsnAsnCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                               261 ThrValAsnProLysGluSerIleLeuLysArqValLysAspIleGlyTyrIlePheLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2333 ACAGISAATUGAAAASAAAGIATAGTGAAAAAGAGGAGGATATAGATACATCITTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SerGlyThrAspLeuSerPheProTrpIleLeuAsnValLeuAsnLeu1,ysAlaPheAsp
                                                                                                                                                                                  201 IleAspSerPheGluThrGlnArgThrProArgLysSerAsnLeuAspGluGluValAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   281 Cluiys/hcAlalysAlaVa/ClyClyClySVa/Clal/CcClyScrCloArglyrlys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481 AladluThrdluAlaThrSerAlaPheGlnThrGlnLysProLeuLysSerThrSerLeu
                                                                                                                                                                                                                                                                             ValliebreProHisThrProValArg1hrValMetAshIhrHeGlnGlnLeaMetMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 341 AladysAlaceolevalvalMetAlathrtyrSerArgSerThrSerOlrAsmiceAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2003 GOGIGOGOTOTICAGGGITATICAATGGCCACATATAGGAGGAAGTACATCTCAGAATCIIGAI
                                                                                                                                                                                                                                                                                                                                                                                                2393 ATETTAAATTCAGCAAGTGATCAACCTTCAGAAAATCTGATTTCCTATTTTAACAACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    501
                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                             Ö
                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   يَد
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               김
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    òλ
```

Ob 1553	CORRESPONDE CONTROLLER	
OY 541 Db 1494	Leughrasmöhnigeröhniscumetaraaspattifisteruaspohnilemetmetogsset 560 111111111111111111111111111111111111	
Oy 561 Ob 1443	Met Tyroly I Ledys Lys Vallys Asulle Asplee Lys Phelys Hetle Valthrala 580 	,
Cy 581	TyrLysAspteubrofftsAlaValGluGbuThrPheLysArqValLeuTleLysGluGlu 600 	
oy 601 0b 1313	CHULYTASPSCTITCTTCVATPholytASESCTV4FbbmetGlbArdLoulysThrAsp 620 FILLCHILLHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH	
97 621 lib 1253	Delaustrical asperthrangeroperotheruserprotteprofisiteproang 640	
Uy 641 Db 1193	SerfigItyrLystheProSerSerfroLeuArqIleProdlyGlyAsnIleTyrIleSer 660 	
oy 661 0b 1133	ProbangsSerProfyLgsTeSerGluGlyLeuProfhrProfhrigsMetThrPro 680 	
9y 681 bb 1073	ArqserarqleteuValserflestystuserPheSlythrSerGlutysPheSlnLys 700 	
97 701 pb 1013	IbeasochmetValcysAsoserAspArqValLeutysArqSerAlachuGlySerAso 20	
95.4 Ob 95.4	ProprotysProtonlysEysLonargphoaspileGluGlySeraspGlualaaspGly 740 	
9y 741 5b 893	SeriysBisLeueroGlyGluseriysPheGluGluLysLeuAlaGluMetThrSerThr 760 	
Uy 761 Db 833	Arq Dratqmet Glodyscholysmetaspaermetasprofesolyscholu 780 	
27 781 3b 77.4	1.78 781 1	
PESHLT 11 105311 100018 DEFINITION VERSION VERSION REVENDED	105411 4597 bp DNA Linear PAT 02-DEC-1 N Sequence I from Patent EP 0259031. 105411 105411.1 GI:591083	494
= =	Unknown. Unknown. Thostassitted	
REFERENCE AUTHORS TITLE JOHENAL FEATURES	1 (bases 1 to 4597) Dryja, E.P. and Friend, S. Human DNA in the diagnosis of retinoblastoma Patent: By 0.25091 Az 1 09-MAR 1988; Loration/Ondittors	
Stros	(2) 1. 4597 //organism="unknown"	

812 g 1454 t

. 7**78**

1485 a

BASE COUNT

```
1282 GAGAAA FIFFGCTAAAGGTGTGGGACAGGGTTGTGTGTGAAAT FGGATTACAGCGATAATACAAA 1341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1042 ATAGACAGTTTTGAAACAGAGAACAGCACGAAAAAAGTAACCTTGATGAAGAGGTGAAT 1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81 Lyst.
cuSerProProMett.
cut.eut.
ysGluProTytt.
ysThrAlaVa<br/>FFIPProTleAsn100
                                                                                                                                                                                                                                                                                                                                                                                                                       101 GlySerProArgThrProArgArgGlyGlnAsnArgSerAlaArg11eAlaLysGlnLeu 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 GluAsnAspIhrArqIleIleGluValLeuCysLysGluHisGluCysAsnIleAspGlu 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           141 VallysAsnValTyrPhelysAsnPheileProPheMetAsnSerLauGlyLauValThr 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9.21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      161 SerAsnGlyLeuProGluValGluAsnLeuSerLysArgTyrGluGluTleTyrLeuLys 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -
8
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      261 ThrValAsnProLysGluSerlleLeulysArqValLysAsplleGlyTyrllePheLys 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               401 LeaGlyValArgLeuTyrTyrArgValMetCluSerMetLeutyuSerCluGluGluArg 320
                                                                                                                                                 742 GGTTCACCTCGAACACCCCAGGGGGGGGGACAGGAGTGCACGGTAGGAAAAAAATA 801
                                                                                                                                                                                                                                                                                                                                                         502 ACATGIGAACITATATATTIGACACAACCCAGGAGITGGATATCTACTGAAATAAATTCT 561
                                                                                                                                                                                                               61 Met.GluAspAspLeuVallleSerPheGlnLeuMetLeur\ysValleuAspTyrPhelle HU
                                                                                                                                                                                                                                                                              41 AlabeuValleulysValSerTrpHeThrPheLeuLeuAlabysOlyGluValLeuGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             802 GAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAAGATGAATGTAATATATAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181 AsnLysAspLeuAspAlaArqLeuPheLeuAspHisAspLysThrLæuGluThrAspSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             201 HeAspSetPheGluThrClnArqThrProArqLysSetAsnLeuAspCluCluValAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241 IleLeuAsnSerAlaSerAspGlnProSerGluAsnLeuIleSerTyrPheAsnAsnCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             221 VallleProProHisThrProValArgThrValMetAsnThrIleClnClnLeuMetMet
                                            Conservative:
Mismatches:
Indels:
              Length:
Matches:
                                                                                           Gaps:
                                                                                                                     US-09-026-459A-37 (1-781) x 105311 (1-4597)
             7.86e 296
4017.00
                                          100,00%
100,00%
                                                                        100.00%
                                                          Best Local Similarity:
                                            Percent Similarity:
Alignment Scores:
                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                                     ó.
                                                                                                                                                                                                                                             pp
                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                        <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ζ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
```

```
...опкоддия
Ниман гетілскіавтема аввесіавеd (РНІ) mkNA, complete eds.
M33647 J02994
М33647.1 дітізлоде
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LCKEHECHIDEVKNVYFKNFIPFMNSLGLYTSNGLPEVENLSKRYEE IYLKNKDLDAR
LFLLHEVTLOFUSIDSFETGETFERSNLTEEVNVIPFHTPVRTVMNTTOGLMMILNSA
SDQPSENLISYFNNTTVNPKESIT RPVKFITYYFKEKFARAVGGBTVETESGRYKLGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TETAAVDEDEMSFTFTELQKNTETSVHKFFNLLKETDTSTKV-DAMSRLLAKYDVLFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LESKLERTCELLIYLTQDSSSISTETINSALVLKVSWITFLLAKGEVLÖMEDDLVISEQL.
MLCVLIVETKLSPPMLLKEPYKTAVTPTNGSPRTPERGGNESAKTARGLENDYRTTEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PLYYEVWESMLASPEPELS UQNESKUUNDU FHMSLILACALEVVMA USKSUSONLDS
GTDLSPPWILINVLNI.KAEDPYKVI ESPUKAESINI UPEMUKHUEKCEHRUMESLAMI SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     l (bases 1 to 4600)

Einend, S. B. (Borwaltz, T.M., Gerber, M.P., Wanq, X.F., Bogenmann, E.,
Ei, F.P. and Weibberg, R.A.

Deletions of a DNA sequence in retinoblastomas and mesenchymal
unors. organization of the sequence and its encoded protein
proc. ungall Acad. Sci. U.S.A. 84 (24), 9059-9063 (1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Draft entry and computer readable copy of sequence for [1] kindly provided by S.H.Friend, 10-FEB-1988. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryelu, Metazou, Cherdata, Ciusiutu, Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                    2482 AGATCAAGAATCITAGTATGAATTGGGGAATCATTGGGGGAGTTCTGGAGAAA 2541
                                                                                                                                                                                                                                                                                                                                                     2662 ARTAANYATYIYYYYYY ARTHIN HILLIHIHIHIHIHIHIHIHIHIHIHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                2722 PGAAPTAPATGEAAAAGEASAAAATGAATGEAATGEATGEATGEATGEAPPEAAACAASSAS 2781
2422 CCCCTTGAAGAGTGGATATAAAATTTGAGAAGGTCTGCGAACACAACAAAAATGAGTGCA 2481
                                              68] ArgSerArgIleLeuValSerIleGlyGluSerPheClyThrSerCluLySPheGluIlys 700
                                                                                                                                                                                                                                                                                                                       741 SerLysHisLeuProGlyGluSerLysPheGlaGlaLysLeaAlaGluMetThrSerThr 760
                                                                                                                                                                                                                                                                                                                                                                                                                          761 ArgThrargMetGlnLysGlnLysMetAsnAspScrMetAspThrSerAsnLysGlnGln 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note-"retinoblastoma associated protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (clone: p4 7R) cDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /codon_start+1
/protein_id="AAA69806.1"
/db_xref="G1:190946"
/db_xret="GDB:G00-118+734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism "Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /cell_type="retinoblast"
1. .4600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /map "13q14.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      retinoblastoma protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone-"p4.7R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .4600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3480530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2782 AAA 2784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781 Lys 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HUMRBA1RA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                              ô
                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                 ŝ
```

STOPOLITE, SKORED POPULE SACPONIO POLONIO TANDMAY SVVSSPKKÖSTIKVNS
TANKELO BASEULOKO TANSTS, STOPOKO PATUR NIOTERLI, SPEPPELBELTUM
LPOUTLOMEYER MEDERITO IMWYSMYSTICK KNOTOLERKI I VTANKOLDRIAVOET PE
RVITIKEERYISTI VEYNSVEMAPI KTOTI (ÇYASTPPETLSPIPI) PSSPREB
TEONIY TSHLKSSYK I SEGLETPIKMIPRSKILLYSTIGESCUSEKPOKINOMYCNSD
FEONIY TSHLKSSYK I SEGLETPIKMIPRSKILLYSTIGESCUSEKPOKINOMYCNSD
KVANKSARISTICK SVETARALIKETTI EĞSUFALNISMILLYSTIGESCUSEKPOKINOMYCNSD
KMINSMILSHANDA

MANISMI SAKERA MANISMI SAKERA HANISMI SAKERA HAS G. 1454 T.

A feeting	ς.		Conservative: 0	Mismatches: 0	Indels: 0	Gaps:
347	A17 ()	00.7104	100.00%	100.00%	100.00%	f,
All quineful Scores:		200	Percent Similarity:	Best Local Similarity:	Query Match:	:40

09 026 459A 47 (1-781) x HUMRHAIRA (1-4600)

-	. 7	(Occ. 1) Carrent v (107.1) 7. Carrent	
5	-	MetserArgkenlentystysTyrAspVallenPbeAlaLeuPbeSertysLeuGluArg 20	0.
43	445	AFGEGARGREET GARGANTA GAT GAT GET GCACT CTT CAACAAAAT GGAAAA GAAAAA SAAAAA SAAAAA SAAAAAA SAAAAAAA SAAAAAA	\$0.4
6.7	7.1	threyschuteutletyrteuthrettabroserseriteserthretutteAsnser 40	0
Ē	505	ANAIGEGAACTTATATETEGACACACCACCACTCGATATCTACTACTCAAAATCT 56	164
5	4	AlafenValLenLysValSerTrpIleThrPheLeuLeuAlaLysGlyGluValLeuGln 60	0.9
- F	565	GANTIGGEOGRAAAAGETETTITITITITITITITITITITITITITITITITIT	24
S S	6.1	MetGluAspAspLeuVallleSerPheGlnLeuMetLeuCysValLeuAspTyrPheIle 80	0.
Ê	679	ATGGAGAGATGAGTGAGATTGAGTTGAGTAATGCGAGGGGGGGG	84
, ,	8		100
Ē	683	AAACTCFCACCTCCCATGTTGCTCAAAGAACCATATAAAAACAGCTGTTATAACCCATTAAA 74	44
Ş	101	GLYSerProArqThrProArqArqGLyGLnAsnArqSerAlaArqTleAlaLysGlnLeu	120
2	745		804
45	1.2.1	14	4.0
Ē	80°	GAAAATGATACAAGAATTATTGAAGTTCTCTGTAAGAACATGAATGTATATATA	164
25	14	VallysAsuvaltyrPhelysAsnPhelleProPheMetAsnSerLeuGlyLeuValThr 16	160
ā	3.65	GEGAAAAAEGITTAITICAAAAAITTTAIACCITITAAFGAATICITIGGGCTTGIAAAA 92	57
5	16.1	-	.80
42	1,76,	FCTAATGGACTICCAGAGGTLGAAATGTTLCTAAACGATAGGAAAATTTTAAA 98	484
3	181		200
40	383	AATAAAGTCTAGATGCAAGATTATTTTGGATGATGAAAAACTCTTCAGAGTCTT	1044
5- 3-	7.01	Heaspsethedufhrdinargith ProArdlysserasnikusptinglasn 2	20
1.	1045		1104
 24	7.71	ValileProProHisThrProValArgThrValMetAsnThrIleGlnGlnLeuMet.Met. 24	240 .
<u>-</u>	1105	GLAALLOT ICCACACACACACACACACACACACACACACACAATLAATGATG	1164
Š	241	1	098
40	1165	ATTITAAAITCANGAAGTGATGCAAGCTCAGAAAAICTGATTTCCTATTTTAACAACTGC 12	224

261 ThrValAsuProLysGluSerHeLeuLysArqValLysAspileGlyfyrHePheLys 280

5

```
1584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2185 TAGAAGGATCTTCCTGATGCTGTTCAGGAGACALTGAAAGGTGTTTTGATGAAAAAGAG 2244
1225 ACACTICAATICCAAAAAAAAACTATACTICAAAAGAATATATAAAATATATAAA 1284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 HO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              381 PhetyrtysValifeGluSerPhelletysAlaGluGlyAsuLeuthrArgdluMetile 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421 ProteuPheAspt.euflet.ysGlnSert.ysAspArgGluGlyProThrAspHist.euGln 440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (100)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            581 TyrLysAspfæuProHisAlaValGlnGlnThrPheLysArqValLeuHeLysGlnGln 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         621 HeleuGlnTyrAlaSerThrArgProProThrLouSerProHeProHistLeProArg 640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SericouphetyriystysVallyrArqLeuAlaTyrLeuArqLeuAshThrLeuCysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2125 ATCTATGCATATGCAAGTGAAGAATATAGACCTTAAALTCAAAATCATGTAACAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601 GluffyrAspScriletteValPhefyrAsnScrValPheMetGluArqueutysthrAsn
                                                                                                               281 GEREÇEPLEATALDEATADOS DEBOTOS DESTETATEM FESTO DE CONTRATORIO DE LA FESTO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE CONTRATORIO DE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1445 CTTGGAGTTCGCTTGTATTACCGAGTAATGGAATCCATGCTTAAATCAGAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Set GLYThr Asplicusor PheProTrp1TeLeuAsnVallæuAsnlæut ysAiaPheAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SerAlaCysProLeuAsnLeuProLeuGInAsnAsuHisThrAlaAlaAspMetlyrLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SerProValArgSerProLysLysGlySerThrThrArgValAsnSerThrAlaAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                561 MetTyrGlyfloCystysVallysAsnileAspLeunysPhetysTleTleValThrAla
                                                                                                                                                                                                                                                                                                                                                            301 LeuGlyValArgLeufyr LyrArgValMetGluber MetLeubysSerGlublubluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  321.1 con Ser 11 e G In A SriPhe Ser 1 y streut Leu A SriA Span Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 leu G In A Ser 1 le
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        341 AlacysAlaLeuGluValValMetAlaThrTyrSerArqSerThrSerGluAsnLeuAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1465 GCGFGCGCFFFFGACGTFGTAATGGCCACATATAGCAGAAGTACATATATAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1525 TCTGGAACASATTGTCTTTCCCATGGATCTGAATGCCTTAATTTAAAGCCTTTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2065 CTGCAGAATGAGTATGAACTCATGAGAGACAATTTGGACCAAATTAGGATGTGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           401 LysHisLeuGluArqCysGluHisArgIleMetGluSerLeuAlaTrpLeuSerAspSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481 AladluthrillnAlaThrSerAlaPheGluthridlnLysProLoutysSerThrSerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    521 ArgLeuLeuSerGluHisProGluLeuGluHisHle11eTrpThrLeuPheGluHisThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541 LeuGlnAsnGluTyrGluLeuMetArqAspArqHisLeuAspGlnIleMetMetCysSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ^{\circ}_{\lambda}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ^{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
```

	·····									; ;	- J. P.		
CACALLOCTOGA 2364	Heryrileser 660 Hillilii Afrialatyira 2424	gametthret 680 	ysphedintys 700 	31001ySerAso 720 	13.4A1.4Asp31y 740 AAGPAGATGGA 2664	4et.Thr.Scr.Thr. 760 	Asotysaluatu 780 		531 PAT 99-3AN-206	rtebrata, Euteleostomi Hominidae, Heme	r,R., Endress.G., screening using signatu		
CAAIAOIL	HyGlyAsn aacccaack	hrProThr: 	hrSerdluf HTHTHH PPP4A97	rgSerAlaC 	TySerAspi HTHHHH GATCAGATC	euAlaG) uh [[[[] TGG: AGAAA	SpThr Sera 		Ting.		Ebner, R., utic screen		4839 781 6: 0 0 0
AITTEGAGIATGCTTCCACCAGGCCCCTACCTTGTCACCAAIACCICACALICCTGGA	SetProfynlyspheproSetSetProf.cedargfleProGlydlydsbillefyrileSet 	Problett gradeförrägirt gatt detningt ybeighroffkrefthri gamet fill it it it it it it it it it it it it it	ATGSCTATGHELGGVALSCTHEGLYGLGSCTPREGLYTRTSGTGLGTYSPREGLUS 	FOASIG LIMETVATGSSASIGSETASPATIGATIJSATGSETATAGTIGTIJSETASI 	FLOFELLS SELECES (15 SEVER) ASKARITER (1 P.C.). ALASKALLAS HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH OTTOCIAAAOOAONGAAAAAAONAOOTTOANATTGAAGGATOAGATGAAAOAAOGA	SerTysHtsLeubroGlydluSerLysPheGlrdlnLysLeuAlaGlaMetThtsCrtTh -	Argibitatometginiyssiniysmotasoaspseimotaspsbosyasolyssiyotu 		4829 bp DNA Patent W0194629. 3679	Chordata, Craniata, Ve Primates, Catarrhini,	Young, P.E., Augustus, M., Carter, K.C., Ebne Horrigan, S., Soppel, D.R. and Weaver, Z. Career gene determination and therapeutic	Agent acts Avalon Pharmaceuticals (US) Avalon Pharmaceuticals (US)	Length: Matches: Conservative Mismatches: Indels: Gaps:
Tectiocatcass	SPheProSerseri 	rProfyrtysfla 	eLcuValSerfled 	tValCysAsnSer/ 	CLPSINSINSINSI 	uProdlydluSerl 	tGInLysGInLysk 		1210 from 1 G1:1810	human Homo sapiens Eukaryota, Metazoa, Chordata, Mammalia, Eutheria, Primates,	., Augustus,M. S., Soppel,D.F ne determinati	Avalon Pharmaceuticals (US) Avalon Pharmaceuticals (US) Loostion/Evalificrs 1. 4839 /ordanish="Romo sapiens /db_xref="taxon:9606" 1534 a 902 c 840 g 15	8.41e-296 4017.00 100.00% Y: 100.00% 6 100.00%
AITITGCAGIA		Prefequence 	ArgSerArgill 		FIUPTOLYSEL HILLIIII OTIOCIAAAOO	SertysHister 		Lys 781 -11 AAA 2787	AX340701 Sequence AX330701 AX330701	~			: ty: anit
2435	641 2465	661 2425	181 2485	701	7.2.1 26.05	741	761	181	RESULT 13 AX 4 CO 1 E FOUS DEFINITION ACCESSION VERSION KEYEGES	ORGANISM	AUTHORS TITLE	HEATURES SOUTOBASE COUNT	All-anneat Scores Fred. No.: Score: Percent Similari Dercent Similari Ducy Match: EB:
Ť	5 =	S É	5 13	2 =	i, 9	학 출	珍	\$ <u>\$</u>	X X Z B C X X X X X X X X X X X X X X X X X X		738 F	# # #	Alli Sector Bess Cure Cure

```
1419 GASAAAIIISTAAASTGGGAAAGGGTGTGTGTGGAAATTGGATCAGAGGSAIACAAA 1478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1059 ICTAATGGACTIGCAGAGGIIGAAAATCIIICIAAAGGAIAGGAAGAAATITATCIIAAA 1118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1179 ATAGAGACHTTTGAAAGAGAGAAGAGAGAAAAGTAAGGTTGAAGAGGGGGAGT 1238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         321 LeuSerIleGlnAsnPheSerLysLeuLeuAsnAspAsnIlePheHisMetSerLeuLeu 340
                                                                                                                                                                                                                     361 ScrGlyThrAspLeuSerPheProTrplleLeuAsnValLeuAsnLeuLysAlaPheAsp 380
              8] LystouSorProProMotLouTosTysGl:ProTyrtysThrAlaValllePr:LleAsn 100
                                                                                                                                                                              819 AAACTCTCACTCCCATGTTGCTCAAAGAACCATATAAAACAGCTGTTATACCATTAAT 878
                                                                                                                                                                                                      [0] GlySerProArgThrProArgArgGlyGlnAsnArgSerAlaArg11cAlaLysClnLcc 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 381 PheTyrLysVallleGluSerPheIleLysAlaGluGlyAsnLeuThrArqGluMetIle 400
                                                28] GlotysPhcA'stysAlaVa\C\pSlnClyCysVa\c\tallCullcdlySerClnArdyrtys
21 ThrCysGluLeuIleTyrLeuThrGluFroSerSerSerIleSerThrGluIleAsnSer
                                                                                                                                                                                                                                                                                                                                                             161 SerAscGlyLeuProGluValGluAsnLeuSerLysArgTyrGluGluTletyrLeuLys
                                                                                                                                                                                                                                                                                                                                                                                                                181 AsnlysAspleuAspAlaArgLeuPheLeuAspHisAspLysThrLeuGlnthrAspSet
                                                                                                                                                                                                                                                                                                                                                                                                                                                              201 | HodapserPhoGlufferGhargthrErchhojtysSorAshLeidspSt.v3l.valAsh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           341 AlaCysAlaLeuGluValValWatAlaThrTyrSerArgSerThrSerGlnAsnLeuAsp
                                                                                                                                                                                                                                                                                  939 GAAAATGATACAAGAATTATIGAAGTTCICIGIAAAGAACATGAATGTAATATAGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      261 ThrValAsnProLysGluSorileLeuLysArqVallysAspileGlyTyrilePheLys
                                                                                                                                                                                                                                                                                                                                                                              .ଘ
---
                       3
                                                  č
                                                                         Ē
                                                                                                    \Omega
                                                                                                                           ċ
                                                                                                                                                    8
                                                                                                                                                                                                      Š
                                                                                                                                                                                                                               ä
                                                                                                                                                                                                                                                          ã
                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                           Ċ
                                                                                                                                                                                                                                                                                                                                  Ē
                                                                                                                                                                                                                                                                                                                                                           \ddot{c}
                                                                                                                                                                                                                                                                                                                                                                                                               \circ_Y
                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       걾
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \ddot{c}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ō.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ô
```

760	SertysHistouProGlyCluSertysPheGluGlntySLeuAlaGluMetThrSerThr	741	5
740	ProfroitysProicoltysLysLenArqPheAspileCluGlySerAspGluAlaAspCly 	721	5 3
720 2738	. The Arich (Met Val Cychan Seramparaya) Lent y sang Serahan 11 fant Hiller (H. 11 fant Hiller) and y serahan Hiller (H. 11 fant Hiller) and Arabana serahan and Arabana serahan serah	701	5 3
700 2678	681 ArqSerArq11e1zerVa1SerTlect1y01uSerPhe01y1hrSerG1u1ysphe01ntys 700 11.111111111111111111111111111111111	681 2619	S &
680 2618	ProtectlysSerProtyrLysTleSerGluGlyLeuProThrProThrLysMetThrProTrollerHTHTHTHTHTHTHTHTHTHTHTHTHTHTHTHTHTHTHT	7557	5 3
660 2558	SerProTyrLysPheProSerSerProLeuArqTleProdtyGlyAsnTleTyrTleSer FELLIGETER FELLIGE	54]	5 2
640 2498	Helandlistyralaserthrargproprethricuserprofilettellettelteroarg Hillericitier in Hillericitier in Hillericitier in Hillericitier in Hillerice in Adraham Additional Additional Carolica Ad	621	5 =
620 2438	CHULYTASpSerffelleValDbetyrAspSerValDbeMetGlbArdLeolyStbrAsn FILELLELELLELLELLELLELLELLELLELLELLELLELL	103	÷ 3
600 2378	TyrtysaspteufrollisalaValdindiuThrfhetysarqValleufletysGludlu 	185	5 -
580 2318	Met 1710 (1711 er ystysvaltysasii Hoaspleufysihetys Hettevalthrala 	56.1	축 용
560 2258	LeudTinasiolouyrdoukeumerargaspargitisteodaspoloutemeteysser 	541	독용
540 2198	Arqueogeografulliste aluteudlulistle Hefrethreuphedlulisthr 	521	क् इ
520	Set Leuther yr Lystysya Llyr Arqueual a fyr Leuar glendasot hi i cocysglu 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	501	S &
500 2078	A La Cluthr Club La thu Ser A La PheGlin thr Clut, yster oteninys Ser thr Ser Leo + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1	481	5 3
480	Ser ProVal ArqSer ProtySTySTySty SerThrThrArqVa IAsnSerThrAlaAsn 	461	क् ब
460 1958	Ser A Langs Brotze a Brotze and In Asha Britist Brada, a Adams Tyrica TELLE HELLELLE LELLE LELLE LELLE ELLE EL	1894	≥ <u>a</u>
440 1898	Professible Asptess Hetyschosertysaspargenotyprothrasphislouglu HELLELLELLE HELLELLE HELLE 421	\$ 3	
420 1848	TysHistordiuarg/ysdiuHisardIleMotdiuserteualaTrpLeuseraspser 4 Filtitititititititititititititititititit	401	독골
1778	THEFTER CONTROLLEGATION OF THE STANDARD OF THE	1711	÷

```
S. (sites)
Hoga,A., Bia,B., Chadim,Z. and Cowell,J.K.
Molecular mechanisms of oncoqenic mutations in tumors from patients
With bilateral and unidateral retineblastoma
Proc. Natl. Acad. Sci. U.S.A. 90 (15), 7851-7455 (1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MAY 1995 MEND TO SERVICE THE US MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 1995 MAY 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cowell,J.K. and Kaye,F.J.
Dartial incremention of the KB product in a family with incomplete penetrance of lamilial relinoblastoma and benion retinal tumors (accesses 9 (5), 1221-1426 (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 (sites)
nodim_2. Hogq.A. and Cowell.J.K.
Mechanisms of oncogenesis in peticuts with familial retinobiastoms
Br. J. Cancer 68 (5), 958-964 (1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Structure and partial genomic sequence of the buman retinoblastoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens cDNA to mkNA.
Homo sapiens
Eukaryota, Metazoa, Chordata, Cianiata, Vertebrata, Enteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidue, Homo,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Onadim,Z., Hogq,A., Baird,P.N. and Cowell,J.K.
Oncogenic point mutations in exon 20 of the RM gene in families
showing incomplete penetrance and mild expression of the
                                                                                                                                                                                                           2799 ACTRANCALCICCCAGGAGAGICCAAAIIICAACAGAAACIGGAAAIGAGIIGIACI 2858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hodd,A., Onadim,Z., Baird,P.N. and Powell,J.K.
Detection of hererozygous mutations in the RBI gene in
relinoblastoma patients using single-strand conformation
polymorphism analysis and polymerase chain rewition sequenting
oncogene 7 (7), 1445-1451 (1992)
                                                                                                  761 ArqThrArqMetGlntysGlntysAmerAsnAspro-merAspThrSerAsnLysGluchu 780 HEFELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHELLERHERHERTERHERHERHERHERTERHERHERTERHERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERTERHERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6 (sites)
Kratzke,R.A., Otterson,G.A., Hogq,A., Coxon,A.H., Geradis,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               retinoblastoma phenotype
Proc. Natl. Acad. Sci. U.S.A. 89 (13), 6177-6181 (1992)
92335261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           L41870
L41870.1 G1:794994
retinoblastoma protein; retinoblastoma susceptibility.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mutation data provided by Dr. B.L.Gailie,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (sites)
McGeo, F.L., Yandell, D.W. and Dryja, L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   susceptibility acno
Gene 80 (1), 119-128 (1989)
90006771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hospital for Sick Children
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Toronto ONT W5G 1X8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ph; 416 813-5868
FAX: 416 813-4989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Br. J. Can
94031584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       555 Univ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94203660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2701949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1352398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1352883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8217609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Canada
                                                                                                                                                                                                                                                                                                                                                                                                                2919 AAA 2921
                                                                                                                                                                                                                                                                                                                   781 Lys 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HUMRE] MKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDI.INE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEFEKENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOTENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       T 111 E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                           GG.
                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                        ò
```

```
/hote-"Tumor GOS13 unilateral trameshift mutation resulting in premature stop; Associated with this matation is a large 13q14.3 sub-band deletion; GOO-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /hote-"Tumer 002563 unilateral mutation causing premature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zhote-"Tumor GOS559 mutation causing premature stop., GOO-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zhote-"Tumor GOS559 mutation causing premature stop.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /qene="RB1"
/noie="Tumor GOS159 unilateral mutation causing a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           premature stop; G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1353. .1469
/gene-"RB1"
/note-"G00-118-734"
        /note-"G00-118-734"
                                                                                                                     /gene="RB1"
/poie:"G00-118-734"
                                                                                                                                                                                                                                      745. .855
/gene="RB1"
/note="G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene="RB1"
/note "G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note-"G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                stop; G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /citation=[5]
/replace="t"
1352. .1375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /citation-[5]
/replace="t"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /citation-[5]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /citation-[5]
/replace="ca"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8.41e-296
4017.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /citation-[5]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /replace-"t"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /gene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /number-13
1400. .1401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /number=10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /replace="1
1187. .1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .1076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /number-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /number=11
                                                                                                                                                                                                                                                                                                                                                                                                          .998
                                         /number=5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /humber-8
                                                                                                                                                                                                             /number=6
                                                                                                                                                                                                                                                                                                                                                                         /number=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /number=9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.:
                                                                                                                                                                                                                                                   exon
                                                                                                                                                                                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exon
                                                                                            exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OXO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /...... not
/note-Trumor GOS19 unilateral mutation causing a tentative
wrong splice; GOO-118-734"
/citation-[5]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RVLIKEEEYDSIIVPYNSVEMORLKINILOONSTERPETLSPIPHIFFSKESSPLER
ISCHRIYISELKSPYKISFGLPTPFKMIDGNSTILVSTGFSFGTISFREGKINGMVCNSD
RIVERARSSNAPRELKKLAPDIEGSDEADGSKHILDGTSKEGGKLARMISTFTRMGKG
KMNUSBIJSNASSEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZITAGSTATUGE "MEDKTERKTAATAAAAAPEDPADEDPEPEREGISGFENDED. PETALOGIKK PEDMERKYSSYDVINGSTÄRKEEMSTG TERKREEMSTG TELAKPEDPADEDBESPERLÄKEIDTESVIKFPRILKEIDTSTKVDNARSELKKYDVLFALLESKYRFRILKEIDTSTKVDNARSELKKYDVLFALLESKYRFRILKEIDTSTKVDNARSELKKYDVLFALLESKYRFRILKEIDTSTKVDNARSELKKYDVLFALLESKYRFRILKEIDTSTKYDVLFALLESKYRFRILKEIDTSTKYDVLFALLESKYRFRILKEIDTSTKYDVLFALLESKYRFYLGMEDDLYTSTGLESKYRFRILKKSTRYLGMEDDLYTSTGLESKYRFYLESKYRFYLESKYRFYLESKYRFYLGMEDDLYTSTGLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLESKYRFYLTAGSKYRFYLESKYRFYLTAGSKYRFYLTAGSKYRFYLTAGSKYRFYLTAGSKYRFYLTAGSKYRFYLTAGSKYRFYLTAGSKYRFYLTAGSKYRFYLTAGSKYRFYLTAGSKYRFYLTAGSKYRFYLTAGSKYRFYLTAGSKYRFYLTAGSKYRTYTTAGSKYRTYTTAGSKYRTAGSKYTTAGSKYRTYTTAGSKYRTYTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MLCVLDYFTKI SPPMLLKEPYKTAV I PTNGSPRTPPRGGNKSAKTAKÜLENDTR I EV
LYKEHECN I DEVKNVYFKNET PFMNSLGLVTSNGLEFEVENLSKRYEL I YLKNN DLDAR
LELDHOKTLÓTOS I DSFETORTPRKSNI DEEVNV I PPHTPVRTVMNT I QQLMMTLINSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTDESFPRIENVENEKAFDFYKVIESFEKABGNETREMIKHERGEHRIMESEAMESD
SPEPDLIKOSKORBGOFOHERSACPENLPLONNHTAADMYESPVRSPKKKGSTERVNS
TANAELOAISAFOTOKPIKSTSESEFYKKVVPLAYERENTEGFWEESFHPPLEMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SDQPSENLISYENNCTVNPKESILKRVKDIGYTFKFKFAKAVGQGCVFIGSQRYKLGV
RLYYRVMESMLKSEEFRLSIQNFSKLLNDNIFHMSLLACALEVVMATYSRSTSQNLDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LEQUELQUEY KLARDEHLDQ LMMCSMYG LCKVKN 101,KFK LLVTAY KDLPHAVOFFFFK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="lumor GOS561 unilateral frameshift mutation causing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note-"RRF64 bilateral familial deletion mutation causing
promature stop"
//replace-"ca"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Anote-"Tumor GOS537 bilateral frameshift mutation causing premature stop.; GOO-118-734" Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] Action [5] 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /produci-"retinoblastoma suspectibility protein"
//protein_id-"AAB59465.1"
/db_xref-"G1:793995"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref-"GDB:G00-118-734"
                                                                                                             /organism="Homo sapiens"
/db_xret="taxon.9606"
E-mail: brenda@hatiz.eric.on.ca.
                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                            /депе-"RB1"
/поце-"G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="RB1"
/note="Gnn-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zuot.e- "G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /hote-"G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     premature stop"
                                                                                                                                                                                            /map="13q14.2"
1. .4839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /codon_start-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /citation-[5]
/replace-"ta"
                                                                                                                                                                                                                                                                            /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /dene="RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /dene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           621. .622
/qene="RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      138. .2924
/qene="kbl"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              638..676
/qene="RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /number-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /number-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /number-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                /number-1
                                                                           .4839
                                                                                                                                                                                                                                                                                                                      . 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       curiation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ratiation
                                                                                        SULFOR
                                                                                                                                                                                                                                               defile
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17.X.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H.XOU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0.880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E(-)(2)
                                                                                                                                                                                                                                                                                                                               D . X . 4
                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  γ.
::
```

26. 459A. 37.	9 Gaps: 0 (1 7H1) x HUMRGIMRNA (1-4839) sdrouteutystystytAspValteuPheAlateuPheSertysteuGluArg 20	
SOL SOL	Met Setafallen Lengisksystytaspaal Lengineaningstellystendinarg 20 ATCH FILLIGHT HITTELLIGHT HITTELLIGHT HITTELLIGHT 120 ATCH CANGACAGA ACAGAGA ACAGAGA ACCAGACACACAGA ACCAGAAGG 638 Threysolulen Hetyrten Throllight AserSer Ser Tleser Throllight Assaser 40 HITTELLIGHT HITTELLIGHT HITTELLIGHT HITTELLIGHT HITTELLIGHT HITTELLIGHT ACAGAGA ACCAGAGA	
FILL FILL TGGT TuAs	60 75 80	•
AAGA Ause	ALGGAGALGACIGGLEGGEGALTICAGTTAGGTAGGTGCTTGAGGTATTTATT B18 ALGGAGAGATGAGTGGGGALTICAGTTAGTTAGTTGGTGCTTGAGGTATTTATT B18 Lystember ProfromettembententenberotyrbyrbyrbyraValtleprotleasn 100 H. GELLELLELLELLELLELLELLELLELLELLELLELLELL	
Serpt FELLI TCACC ASBAS FELLI ASBAS	GTYSCTPTOATGTBTPLOATGATGGTGGTAAAAGATGATGATGATGGTGGTGGTGGTG	
11. ysAs 11111 3AAAA Asbd1 11111 1AA166	VallysAsuValTyrPhelysAsuPhelleProPheMetAsuSerLeev3lyLeuValThr 160 01011111111111111111111111111111111	
LLYSAS LLHTT LAAAGA ASPSE LTTTT NGACAG	20 11 22 12	
1116PT MATTOC LEUAS 111414	Vallictoprofish recovalargth Valmetasnihritedindinkamet 240 [HILLICHICHICHILITHILITHILIHILIHILIHILIHILIHILIHILIHI	
rValAs 	Thr Val Asselve Lysel user De Leu Lys Arq Val Lys Asplied by Tyr Liefhe Lys 280	
idlyva HELFLY IGGAGI	326 153	
ITAICCAT		

```
1839 CCTTFATTTGATCTTALTAAACAATGAAAGGACCGAGAAGGACCAACTGATCACTTGAA 1898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2139 CGCCTTCTGTGTGTGTGTGTGTTAGAACATATATATATGGAACATTTTCTAGTAGAAAA 2198
                                    401 LysHisLeuGluArgCysCluHisArglleMetGluSerLeuAlafrpLeuSerAspSer 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421 ProLeuPheAspLeuIleLysGlnSerLysAspArqGluGlyProThrAspHisLeuGlu 440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            441 SerAlaCysProLeuAsnLeuProLeuGinAsnAsnHisThrAlaAlaAspMetTyrLeu 460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46! SerProValArgSerProLysLysLysClySerThiThrArgValAsuSerThrAldAsn 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481 AlaGluThrGlnAlaThrSerAlaPheGlnThrGlnLysProLeuLysSerThrSerTeu 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              501 SericulbetyriystysvalTyrArqicaAlaTyrLeaArqicuAshibiLeaCysdia 520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                561 MctTyrClyllcCyslysValtysAsnilcAsplædtysfætysilelleValthiAla 580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             581 TyrtysAspteuProHisAlaValGlnGluthrPhetysArqValLentletysGluGlu 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 621 HeleuGlutyrAlaSerThrArqProProHntleuSerProHeroHist.eProArq 640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       64] SerProlyrtysPheProSerSerProLenArqTleProXlyGtyAshflefyrtleSer 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661 ProLeulysSerProTyrLysIleSerGladlyLeuProThrProThrLysMerThrPro 680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       681 ArgSerArgl1eLeuValSerTleGlyGluSerPhe01yThrSerGluLysPhe01nLys 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         701 HeAsnGluMetValCysAsnSerAspArqValLeutysArqSetAlaGluGlySetAsn 720
                                                                                                                                                                                                                                                               38! PheTyrtysValifeCluSerPhelletysAlaGluOlyAsnLeuThrArgCluMetile 400
                                                                                                         361 SerGlyThrAspLeuSerFheProTrpIleLeuAshValLeuAshLeuJysAluFheAsp 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    521 ArgiculcuSerGluHisProGluLcuGluHisHortIntillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittilli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541 LeuGlaAsaGluTyrGluLeuMetArqAspArqHisLeuAspGluIleMetMetCysSer
to;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ਰੂ
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ^{\circ}_{Y}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
```

```
/db_xrof="G1:199959"
/db_xref="G1:199959"
/db_xref="GB6:600-118-734"
/db_xref="GB6:600-118-734"
/db_xref="GB6:600-118-734"
/db_xref="GB6:600-118-734"
/db_xref="GB6:600-118-734"
/db_xref="GB6:600-118-734"
/db_xref="GB6:600-118-734"
/db_xref="G1:1900-118-734"
/db_xr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               номинь тетіпоБіавтома завоертіБіііту mkNA, complete eds.
M154oo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 243 to 4740)
Lee W H , Rockstein, P., Hong, F., Young, L.J., Shew, J.Y. and Lee, E.Y.
Human retinoblastoms susceptibility gener cloning, identification,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota, Motazoa, Chordata, Graniata, Vertebrata, Buteleostemi;
Mammaiia; Eutheria; Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 (bases 1 to 480)
Lee E.Y., Brokstein, P., Young, L.J., Lin, P.J., Posenfeld, M.G. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Draft entry and computer-readable copy of sequence in [1] kindly promided by R.Bookstein, 27 APR 1987. Location/Qualifiers
                                                                        25/3 AIAAAIGASAIGGIATGIAAGAAGGAAGGITGTGTGAAAAGAAGTGTGAAAGAAGAAGAAA
                                                                                                                                                                                                                                                                                                                          2799 AGTAAACAFCTCCCCAGGAGAGTGGAAATTTGAGGAGAAAGTGGCAGAAATGACTTCTACT 2858
                                                                                                                                                                                                                                     LockW.H.
Molecular mechanism of refinebiastoma gene inactivation in retinoblastoma cell line Y79
Proc. Natl. Acad. Sci. U.S.A. 85 (16), 6017-6021 (1988)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      retinoblastomā susseptibility.
Homo sapiens (clone: RB [1,5]) toetus retina cDNA to mKNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note-"retinoblastoma susceptibility protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and sequence
Science 235 (4794), 1394-1399 (1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /ordanism-"Homo sapiens"
/db_xre1-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1-1-AAAAGGB07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="retina"
/dev_stage="loetus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product-"rbs mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /map-"13q14,2"
//olono-"RD-[1 6!"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codom_start-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /qene-"RR1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="RB]"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    M15400.1 GI:190958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .4740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .4740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .4740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87149056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3823889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3414073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23:3 AAA 2921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   781 Lys 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2011 os
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENTE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOHNSON MEDITAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A TOESS IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       delle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDILNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               m N NA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOHN KANAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEA, UKLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.11.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N. I.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HUMKES
```

```
STÇPGENI ISYTNYTUNDYESILFBUYDT TITFPIFFTARAN 24 STVET 12 ETKLAY
RIZYRYMESMIKSBEBRLSIQNFSKLLNDNIFBIMSLLACALEVVMATYSKSTSQNLDS
GIJASITYMI LIVVINLKAR-IN TOTAF IN TAKONLI REMI ALHERCHEH MESTAMI SD
SPLEDLI KÖSKOPFGEPTITH USAGPI NI PLOMNHTANIMY SPVESKKK.SST PRVNS
"ANAETGATSAPOTOKTI KSTSLSLFFKKYTHANIMY SPVESKKK.SST PRVNS
"ANAETGATSAPOTOKTI KSTSLSLFFKKYTHINTLERLI ISHPFLER I INT
LEQHTLOONEYELMRPRHILDO INMCSMYGICKYNINDLKFKI IYYTAYKDI PHAVQETTY
                                                                                                                                                                                                                                                                                                                                                                   FVLIKEEEYPSTIVFYNSVFWJELKTHILLTASTERFILLFILLELAKKEFSSPLK
IPGGNIYISPLKSPYKISEGLPTPTKMTPRSRLLVSIGESFGTSEKRYKINOMVCNSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RVLKRSADGSNIPPKPLKKURFD I EGSDEADGSKHI JÖDSKFÖGKLAEM I STRI HMÖNU
KMNDSMDTSNKEFK "
```

1038 bp upstream of EcoRI site; chromosome 13q14.1-q14.2. 862 g 1483 t 2 / 22 HASE COUNT ORIGIN

> P Ξ

	steuslaary 20 	ullcAsnSer 40 	GluValLeuGln 60 		eProlleAsu 100 	aLysgluteu 120 ffffffff AAACASTA 939	nileAspGlu 140 	yteuvalihn 160 	eTyrLeuLys 180 	uThiAspser 200 	udiuValAss 220 [[]	nLftd Met 240 	rFheAcaAcaCys 260
encence at the second at the s	+0) LeuPheAlaLeuPheSerL; 	#Brcyscluleciletyrlectheleiphoserserfleserthfolullesinser 	PheLeuLeuAlaLysGlyG} - - - - - - - - - - - - - - - - - - -	Met GlukspaspteuvallieserPhedinteumetteudysvalteuksfryrPhet 	Eysticuscepteoteoteoteoteotyschappotyphysthealavaliticibetheasi 	ystuasnarqssrataargiteat 	Gluasraspthrafgileilegluvalleedyslysglahisgludysasnileaspelu 	[1] Valizsasuvaltyithelijasks.Pk.HelioPhometasuserhesolyhouvallh 160] 	SerLysArqtyrGluGlull 	AspäisAspLysThiLeugl 	HEASEBERPROSTUTEESTRAFFERPEARTIYSSCFASRICGASPOLUGIGVA FAST FEFFERENTET FEFFERENTA GARACACAGAAAAA GEAAGTAAGTTA GARGAAAAAGGAAATAA GAAATAA GAAAAAA GAAAAAA GAAAAAAA GAAAAAAA GAAAAAA		Wanteulleserry
2.34c-295 4011.00 99.87% 99.74% 99.85%		ulletyrtkurbrglabro IIIIIIIIIIIIIIIIIIIIIIIII TATATTTGACAGAAGGC	AlaLeuValLeuLysValSorTrplleThrPheLeuLeuAlaLysGly 	pLeuVallleSerPhecln 	obroMetheubeuryschu 	4ThrProArqArqGlySln 	rArgilellessavalles 		uProGlavalGluAsnLeu 	uAspAlaArqLeuPheLeu AGATGGAAGATTATTITIG	cclafbrdinargfhriti 	OHESTEPFOVALARGEE 	AsnSerAlaSerAspGlnProSerGlu
imilarity: 1 Similari ch:						GlySerProArginiti	GludspaspTh 	Vall <i>T</i> SASDVa 	SerAsaGlyLe 	AsuLysAspled	::caspScrPho		IleLeuAsnse
Pred, No. Score: Perrent S Best Loca Query Mat. DB:	3 80	Oy 21 Db 640	Qy 41 Db 700	Qy 61 Db 760	078 820 DD 820	Qy 101 лъ ява		1 1	2y 151 0b 1060	Oy 181 Pb 1120	- =	97 221 nb 1240	99 241

LCKEHECNIDEVKNYFKNFIPFMNSI/ALVTSNCH PEVENISKRYSETTILKNKPL/NPP LFLDHDKTLQTDSIDSFETQRIPRKSNLDEEVNIIPPHTPVRITVMNTIQQLMMILNSA MICVIDYFIKI,SPPMILKEPYKTAVIPINGSPRFPRRGONRSARIAKOLENDTRITEV

ā	1 4000	ATTLIAAALTOTGGAAGTGALOAGGTTGAGAAATGTGATTTTGGTATTTAACAAGTGC	1459
5 3	26.1	TbitVaTAsnProtysGTUSerTTeLeuLysArqVaTLysAspTLeGTyTyrTTePheLys 	280
5 :	281	GlutysPheAlaLysAlaValGlyGlnGlyCysValGluIleGlySerGluArqTyrLys	300
3 5 3	401	ONGANA	1479-1420-1536
§ 3	421	42] LOUSOT HOGH ASHPOSOT PELONASNASSATTI HUMATISMASTANDAN AND AND AND AND AND AND AND AND AN	340 340 1599
λ <u>3</u>	141	ALACYSALALEUGLUVALVALMETATATATSERAKASEKTHESEGLAASILEUASP 	360 1659
45 E	46.1 15.60	Sertely thraspicouser Phetrotrated to Leuasnicou, ysalatheaspilled in the constant of the cons	380 1719
25 25	181	PhetyrtysValiteStuserPhettetysAlaGludtyasnicerthrarqdiuMettle TITHTITHTETHTITHTITHTITHTITHTITHTITHTITH	400
5 3	401	Lysthistand daracyssibilisard LewerGlusertauhatradeuserasser 	4 20 1839
5 3	421	ProtaupheAsptaulletysülnSertysAspargöludlyProthrAspHistauGlu -	440 1899
45 50 12	1300	Ser Aladys ProtecuAs narouproteuta nasnas nii sthralaa laasamerityriteu 	460 1959
5 G	46.1	SertroValArqserProLysLysCysG1ySerThrThrArqValAsuSerThrAlaAsn 	480 2019
55	481	ALACTUINT CLINALATHI SCENTALAPHEGINTHEGINLYSPROLCHLYSSCETTHEGOTAGAGACACACACACACACACACACACACACACACACACA	500 2079
5 3	501	SectionPhetyrtyStyStyStyTratgloudiatyrtouargicuasidhricuiCysGtu 	520 2149`
5 3	521	Argizetteuserserstudiskrostudeusbudistlettetrethrizeushestalisthr HTFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	540 2199
0.y 10E	541	LeurThashdlufyrdlufeuwetatgasparghisteruaspGlbflemetMetGysSer 	560 2259
<u> 5</u>	561	Met 1976 J. H. ee'ys fysyd flysasin Leaspleulys Phelys Helleval fhrala 	580 2319
5 3	184	Tyttysaspta-uProffisalaValGluGluThrPhetysargValfa-uTleLysGluGlu 	600 2379
4.1	501	GHILYFASPSOTTICH CVALIBHCTYFASHSOFVALPBOMOTGLHAFTHLEITH GHILYSTHFASH GHILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH GANARANATARATATATATATATATATATATATATATATAT	620 2439

```
2440 ATTEIGGAGIAGOLIGGAGGGGGCOLAPOLIGIGACGAJACTICAGALICOGGA 2499
621 IleLeuGlnTyrAlaSerThrArqProProThrLeuSerProIleProBis1leProArq 640
                                                              681 ArgSerArgIleLeuValSerIleGlyGluserPheclyThrSerGlutysFtæGlnLys 700
                                                                                                                                                                        781 Lys 781
                                                                                                                  QQ
                             qq
                                                  qq
                                                                       q
                                                                                   ò
                                                                                            Q
Q
                                                                                                       ολ
                                                                                                                                       9
                                                                                                                                                   Š
                                                                                                                                                             ΩŅ
                                                                                                                                                                       οχ
                                         ò
                                                            ó
                                                                                                                              ŝ
```

Scarch completed: January 18, 2003, 22:20:16 Job time: 3462.73 sees



Charlotte version 5.1.3 Copyright (c) 1993 - 2003 Compugen Ltd.

January 16, 2003, 15:20:17; Search time 5509.12 Seconds (Without alignments) 17554.275 Million cell updates/sec 4323 | GCCAPCATGGAGAAGTTC.....AAAYGAGGAFTATTGATAGT 3323 4109280 2054640 seqs, 14551402878 residues foral number of hits satisfying chosen parameters: Post processing: Minimum Match 0% Maximum Match 100% Listing lirst 45 summaries nucleic search, using sw model IDENTITY_NGC Gapop 10.0 , Gapext 1.0 em_vi:* em_htg_bum:* em_htg_inv:* em_htg_othev:* em, ht q_mus; em, ht q_mus; em, ht q_mus; em, ht q_mus; em, ht q_mus; em, ht q_y, em; em_ht q_y, hum; em, ht q_y, hum; em, ht q_y, hum; em, ht q_y, hum; em, Minimum DB Seq length: 0 Maximum DB Seq length: 200000000 US 09 026 459A 32 em_tun:* 46 b4q: 4 46 m: 4 46 om: 4 46 p4: 4 46 p1: 4 46 p1: 4 46 p1: 4 em_sts:* qb_sts:* db_sy:* em_ba:* em_pat: em_in:* **◆**: 010 = 00+ 4b_re:* db_un: qb_vi:* €4M_MU:* #:mo_m⊶ **★**:AG=m→ * : [d=mo rid_m→ :JO_Me Gentimb1:* Ę lutte: Perfect score: Securing table: oM nucleic intabase : Sequences Seat ched: Pun, on:

Pred. No. is the number of results predicted by chance to have a

em_htqo_other:*

score greater than or equal to the score of the result bench printed, and is derived by analysis of the total score distribution.

, P	30016	HIJI PW	waten nength on	2		nortquisse.
		α	4	5	HUMRBAIRA	M 45.47 Human 1etin
	2 3315	93.8	4835	ç	AX 440701	AX (40.701) Sequence
		8. 55	4849	5	HUMKBIMKNA	L41870 Homo Sapien
	4 3313.4	56	4597	ټ	105411	Logarita Seguence 1
		55	4547	æ	109469	1 ooutenhes 898801
		x (÷.	HUMKHS	M15400 Human retin
		6 / 6		¢.	A01444	A01444 B.sapiens D
	8 3222.4		7 (1) (2)	، د	ARS72041	Aku7z041 Sequence
c		, , ,	다. 건 전 전	u)	AR07.2032	ARC: 2042 Sequence
	10 3222.4	76,	1	ŭ.	118496	[]8496_Sequence_]
U		,	(1) (1) (2)		1.849.1	Lindal Statement
~				ď.	AR091965	ARCHING Sequence
		D.		w	AR098189	ARGURIBA Sequence
		æ		÷	AR207841	AKZC7841 Sequence
_		78	₹ 567	ت	BD009728	BESSET BESSET
	6 2623	78.9		Ŷ	181465	181465 Sequence 2
_		78.9		5	HUMKRSA	MS8419 Muman rotin
_	26	7.8		ي	AR144747	AK144747 Sagnoria
_	2000	α α α		¥	ยาวรคก	El Charles Constant
10		. T		=	MISDATORDA	THE WILL WILL SEE THE
10				=======================================	ROSELLOSME	The property of the second sec
10	0.00	44		· u	1100113	
4.0) - V	۱ ،		
1 C				٠.	GURELINE	A72218 6. domesticu
4 :	-	0.0		٠.	AF 230712	AFZ SO/4Z Camis fam
71 :	-		1 : 1 1 : 1 2 : 1	٠.	NVPETINISP	YOUNG N. Tirideso
14 :	oι Σ		14 1 14 1 14 1 14 1 14 1 14 1 14 1 14 1	υ.	109 492	10.34.37 Sequence 25
73 .			7007	•	HUMICES 2 4	MZ/856 Human retin
~1			C 1810	J	AL.136460	Al.136960 Human DNA
~		25	20	3	HUMKELBLAS	Lilylo Homan retin
~	30 723.4	~		_	G06460	G06450 human SIS W
~		7.	3.486	ت)	AF102861	AF102861 oncorhyne
.~	42 639.2	19.	2730	u,	AY008289	AYCOMENS OFFEIRS 1
~	483	14.5		<u>ျ</u>	RATRINBLST	LOTIZ6 Rattus norv
~	347.2	p4		5	AF04 3224	AFU44224 Homo sapi
~	28	æ		2	AY125075	AY125075 Danio ret
~	C	۲-		J.	F436015825	AF146049 Pan trod1
~	37 248	ŗ.		1 1	G138 42	G2 44 42 RB1 27 Rand
~		3		- 1	AC105877	ACT05877 Rattus no
٠ د				ų:	7377	Ellists aby to mkn
	40 220 R		-	ú	F12561	Name of Angles (Sept. 1997)
·	3 220 B			- 42	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	FILE SOLD COMP. CO. HILLIAN
			26 11 3		3 9 30 (. 1	2 4-1-1-10 April 1-1-10 April 1-10 Ap
	1.0		1607) 4	, p = 0.00 c	TOTAL CANADA TOTAL
	٠,		/69T	c :	EU994 I	HOTHM VNG I BEAGE
4	4	9		J.	HUMRBSY/9	M19701 Human mutat
4	5 199	9.0	3.20	<i>-</i>	F446015S16	AF346030 Pan trod1

RESULT 1 HUMRBAIRA LOCUS	HUMKHA1RA 46.00	4600 bp mKNA Tinear PKL 12-500. 1995
DEFINITION	Human retinoblasioma associated (RBI) mRNA, complete eds. M83647 J02994	ed (RBI) mKNA, complete eds.
VERSION KEYWORDS	M33647.1 GI:190945 retinoblastoma protein.	
SOURCE	Homo sapiens (clone: p4.7R) cDNA to mRNA. Homo sapiens	ONA TO IDRNA.
	Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Eutele Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo,	Bukaryota, Metazoa, Chordata, Chamiata, Vertebrata, Enteleostomi, Mammalia, Butheria, Primates, Catarthini, Hominidae, Homo,
REFERENCE AUTHORS	<pre>1 (bases 1 to 4600) Friend, S.H., Horowitz,J.M., G</pre>	 (bases 1 to 4600) Friend, S. H., Horowitz, J.M., Gerber, M.R., Wanq, X.F., Roqeumann, E.,
1111.8	Li.F.P. and Weinborg, R.A. Deletions of a DNA sequence i	Li,F.P. and Weinborg,R.A. Deletions of a DNA sequence in rethroblastomas and mesenrhymal

```
LOKEHEGITDEVKNYYEKNETPEMISTATUTSINGT PEVENTSKRYFETYLKNKNLDAR
LELDHDKTLQTDSIDSFETQRTPRKSNLDEEVNYTPPHITPVRTVMNTTQQLMMILINSA
SDQPSFNTJSYFNNTTVNPAESTT KRYKIJGY TEKEREAAAVAGGOVFTGSGRYKTAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RVI TREEFYDS I JUFYNSVEMGELKTN I LOYASTEPPTI, SP I PH I PREPYRFPSSPLR
POON Y TSR KSPYK I SPGLDTPTRWIPPSSP I LVSTCRSFGTSEKFOKTNOMONONSD
PVI R PSAPSGNPPKPI KKI BFTLIFFSDFA ("SSKHI PFT SKFOLKI AFMI ST P I PMOKN
KMNDSMDTSNKEEK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VRLEPEETEEPDE LALGÖKLA I POHVKERAMLI WEKVSSVIÄVYLÄÄY LÜKKKET WOLG
LETAAVOLDEMSETETELÖKNI, ELSVHNE ENLIJKETOLSTAVONAMSKILIKKYOVLFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RLYYRVMESMLKSFEERLSIQNFSKLLNDNIFHMSLLACALEVVMATYSRSTSQNLDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTDLSEPWILINVLALKAFDFYKVIPSFIKABONLTREMIKHLERGEHRIMESLAMLSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /translation-"MPPKTPRKTAATAAAAABPPAPPPPPPPEDPEQDSGPEDLPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MECVEDYFIKESPPMELKEPYKTAVIPINGSPPTPPROGNESARTAKQLENDTRIIEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SPLFDLIKQSKPREGPTDHLESAPPLNLPLQNNHTAADMYLSPVRSPKKKGSTTRVNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TANAETOAT SAFOTOK PLKSTSLEFYKKVYRLAYLRLNTLCERLLSEHPELEHTIWT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LFQHTLQNEYELMRDRHLDQIMMCSMYGICKVKNIDLKFKIIVTAYKDLPHAVQETFK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LESKLERTCELLYLFOPSSSISTEINSALVI,KVSWITFI,LAKGEVI,OMEDDLVISHOL
                                                                                                  Draft entry and computer-readable copy of sequence for [1] kindly provided by S H Filend, 10-FFR-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       249 GITTGCACTCTFCAGCAAATTGGAAAGGACATGTGAACTTATATATTTGACACCCAG 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                189 IGATACCAGIACCAAAGIIGAIAAIGCIAIGICAAGACIGIIGAAGAAGIAIGAIGIAII 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1)? IGAIACCASIACCAAAGFFGAIAAFGCIATGTCAAGACTGTTGAAGAAGTATGAFGTATT 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       477 GITTGCACTCTTCAGCAAATTGGAAAGGACATGTGAACTIAIAIATTTGACACAACCCAG 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30% CAGIJ-CGATALCIACTGAAALAAATTCIGCATTGGTGCTAAAAGTTTCTTGGATCACATT 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               537 CAGITCGATATCIACIGAAAIAAAITCIGCAIIGGIGCIAAAAGIIICCIIGGAICACAII 596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       369 ITTATTAGCTAAAGGGGAAGTATTACAAATGGAAGATGATCTGGTGATTTCATTTCAGTT 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tumors: organization of the sequence and its encoded protein Proc. Natl. Acad Sci H S A R4 (24), 9859-9063 (1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          557 TGAGGTACAGAAAAACATAGAAATCAGTGTCCATAAATTGTTTAACTTACTAAAAGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 9; Length 4600;
                                                                                                                                                                                                                                                                                                                                                                                                                            /qene-"RB1"
/note-"retimoblastoma associated protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                815 g 1454 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xret="G1:190946"
/db_xret="Gpp.gnn=118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99.8%; Score 3315; 1
100 0%; Prod No 0;
                                                                                                                                                                                                            /organism-"Homo sapiens"
/db_aref-"taxon:9606"
/map-"13q14.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /protein_id="AAA69806 1"
                                                                                                                                                                                                                                                                                                                 /cell_type="retinoblast"
1. .4600
                                                                                                                                                       ocation/Qualifiers
                                                                                                                                                                                                                                                                                              /elone="p4.7R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /codon_start-
                                                                                                                                                                                                                                                                                                                                                                         /gene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                   .2790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1489 a
                                               88097427
                                                                              3480530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 3315;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Querry Match
Rest Loral F
                                                                                                                                                                                           Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SASE - TONT
                                                                                                                                                                                                                                                                                                                                                      TOLL
                            JUNNAL.
                                                                                 PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                        7
                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \tilde{\mathfrak{Z}}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
```

```
1889 TGTCGAAATTGGATCACAGGATACAAACTIGGGTIGGCTIGTATIACCGAGTAATGGA 1148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1449 GGAATCCCTTGCATGGCTCTCAGATTCACCTTTATTTGATCTTAAACAATCAAAGGA 1508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1677 GGAATCCCTTGCATGGCTCTCAGATTCACCTTATTTGATCTTATTAAGAATGAAAGA 1736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     959 AAAHOUGATITOOTATITTAAGAAGTOOATOOAATOOAAAGAAAGTATAOTOAAAAG 1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1029 ACTICAAGGALATAGGATACATCITIAAAGAGAAALLIGCTAAAAGCIGTGGGAGAGGGIIG 1088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1497 HAGCAGAAACHACAHCHCAGAAHCHIGATHCHGGAACAGATHFGTCH FFCCCALGGATICH 1556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1329 GAATGFGCFFAATFFAAAAGCCTTTGATFTFTTACAAAGTGATGGAAAGTFFFALGAAAGC 138B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            957 TAAAGGATAGGAAGAAATTTATGTTAAAAJAAAGALCTAGATGCAAGATTATTTIGGA 1016
                             549 CAGGAGIGCAGGATAGCAAACAACIAGAAATGATACAAGAATIATIGAAGTICICIG 608
                                                                                                                                                                                                                                                                                                                                            609 HAAAGAACAHGAATGTAATATAGAFGAGGHGAAAAATGTTTATTTCAAAAATHTTATAGC 668
                                                                                                                                                                                                                                                                                                                                                                                                 837 TAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTTCAAAAATTTTATATC: 896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1017 TCATGATAAAACTCTTCAGACTGATTCTATAGACAGITTTGAAACACAGAGAACACGCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1149 ATTOPATGOTTAAAATGAGAAGAAGGATTATGGATTGGAAAATTTTAGGAAAATTGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1377 ATCCATGCTTAAATCAGAAGAAGGATTATCCATICAAAATTTTAGCAAACTTCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  429 AAFFGTATIGHGTFTGAGTATTTATTAAAGTGTGAGGTGGGATGTTGG FGAAAGAAG
                                                                                                                489 ATATAAAACAGGGGTTATAACCGATTAATGGTTCACCTCGAACACCCAGGCGAGGTCAGAA
                                                                                                                                                                   717 ATATAAAACAGCTGTTATACCCATTAATGGTTCACCTCCAACACCCGAGGGGAGGTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                         669 TETTEATGAATTECTETTGGACTTGTAACATCTAATGCACTTGCAGGCTTGAAAATCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    729 TAAACGATACGAAGAAATTTATCTTAAAATAAAGATCTAGATGCAAGATTATTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1137 TALGAACACTAVCCAACATTAALGATTTTAAATTCAGCAAGIGATCAACTTTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1209 TGACAACATTTTTCATATGTCTTTATTGGCGTGGGCTCTTGAGGTTGTAATGGCCACATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1269 TAGCAGAAGTACATGTGAGAATGTTGATTGTGGAAGAGATTGTGTTTGGGAATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1557 GAAIGIGCTTAAITTAAAAGCCTTIGAITTTIACAAAGTGAICGAAAGTTTIAICAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1389 AGAAGGCAACTTGACAAGAGAAATGATAAAACATTTAGAACGATGTGAACALCGAAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  849 AAAAAGEAAD (193A BAAGAGAGAHOFAA FIQQ LQQAQAQAQAQ QQAGTTAGGAQTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             909 INTGANCACIATOCANCANTANTGAIGATITTANAITCAGCANGIGATCANCCTCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
Q
                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ڃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ολ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
```

				,														
1568 1796	2 2	1688 1916	-	~	1868 2096	1928 2156	1988 2216	2048 2276	2108 2336	216 239	2228 2456	∞ <i>-</i> -	2348 2576	40 63	2468 2696	2528 2756	01 01	2648
COGRGAGGACCAACTGATCACCTGAATCTGCTGTTGTCCTTTAATCTTCGTCGAGAA 		AACTAOOGIGIAAATICTACTOCAAATOCAGAGAGAGAGAACCAACCITCAGCTTTCAGACTTTTTTTTTT	COAGAAGCATTGAAATCTACCTCTTTCACTGTTTATAAAAAGTGTATGGGTAGG 	CTATCHORDOTAAAFACACHTOLGAAGGCTHCTGTGTGAGGCAGGATTAGAACA ETHTELETHTETHTETHTETHTETHTETHTETHTETHTET	TATCATCHORACTCH I ICCACCACACCC I CCAGAALGAGTATCAACTCATGAGGGGAGG 	OBYATTIGGACGAAAFTAFGAFGTGTGCATGTATGGCATATGCAAAGTGAAGGAATATAGA 193 	OTTIAAATICAAAA ICATIGLAAPAGCATACAAGGATCITECTCATGATGTTCAGGAGAC 	AAAGGTGTFFTGAL 	2 = 2	CTRIBICACGAFRACTICACATTICCTCGAAGCCTTACAAGTTITICTTAGTTICACCCTTAGG		POPOGRACIA POPORA CA DA ADA DA DA DA DA DA DETA CONTROCTA DE CONTROCTA DE LA LOCA DE LOCA DE CONTROCTA DE LA LOCA DELLA	APPERGRAFIE FORMAND FICAGAAAATAAA ICAGA IGCFATGTAACAGGGGGGGGGT TELLELLELLELLELLELLELLELLELLELLELLELLELL	OFTITAAAGAAGTOCIGAAGGAAGGAAGGCIGCIAAACGACIGAAAAAAGAAGGITTIGA FILLIFILLIFITTITITITITITITITITITITITITIT	TAFTGAAGATCAGATGAAGCAGATGGAAGTAAACATCTCCCAGGAGAGTCCAAATTTCA 		LAGRA FORALAR CIRCAAN AAGGAAGAGAAGTGAGGA ICTICAGGACGTTGGTGGACACTG 1 1 1 1 1 1 1 1 1 1	TGTACACCTCTGGATTCALTGTCTCTCACAGATGTGACFGTATAACTFTCCCAGGFTCTG
15.09		16.29	1689 1917	- F			1929 2157	1989 2217	2049 2277	2109		2224	2584	2349	24.09	2469 2697	2529 2757	6.857
5 g	5 3	55 25 25	5 4	5 3 5	<u>}</u> 4 5 €	\$ <u>\$</u>	55 DB	5 c3	<u>\$</u>	45 25	5 g	Š <u>\$</u>	5 3	5 G	5 ਵ	5 G	55 65	Š

```
Horrigan,S., Soppet,D.R. and Weaver,Z.
Cancer gene determination and therapeutic screening using signature
gene sets
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear PAT 09-JAN 2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Verlebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                          2877 ITTATGGCCACATTTAATATCTTCAGCTCTTTTTGTGGATATAAAATGTGCAGATGCAAT 2936
                                                                                                                                                              2889 GCCTGTGTGACTACTTTGCCTTCTTTGTAGCATATAGGTGATGTTTGCTCTTGTTTTA 2948
                                                                                                                                                                                                                                                                         3249 ACCTCAGAATGTAAAAGAACTTACTGATTATTTTCTTCATCCAACTTATGTTTTAAATG 3308
                                        2649 TITTATGGCCACATITAATATCTTCAGCTCT-FITTGTGGATATAAAATGTGCAGATGTAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                            Young, P.E., Augustus, M., Carter, K.C., Ebner, R., Endress, G.,
                                                                                                                                                   2769 AATCTTGTGTAAATCCTGGCATTTAAAAAGTTGTAGCAGATTGTTTGCTTCTTCCAAAGTA
                                                                                                                                                                                                     2829 AAATTGCTGTGTTTTATGGALAGTAAGAATGGCCTAGAGTGGGAGTCCTGALAAGCGAG
                                                                                                                                                                                                                                                                                                                                                                       3009 TATCTTCCAAATGCAATTTCATTGACTGCCCATTCACCAAAATTATGCTGAACTGTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                            3069 CAAAAATGGATATTATTAGAAATTAGAAAAAATTACTAATTTTAGAAATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3189 TAAAAGCTGGAAGCAAAGTATAACCATATGATATCATAGTAGTGGAAAGAGATTTGAT
                                                                                            CNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent: WO 0194629-A 1219 14-DEC-2001;
Avalon Pharmaceuticals (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1210 from Patent Wo0194629. AX330701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4839 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX330701.1 GI:18103679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3537 AGGATTATTGATAGT 3551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3309 AGGATTATTGATAGT 3323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .4839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AX330701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                        οy
                                                                qq
                                                                                                                   q
                                                                                                                                                                                                     ò
                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                ó
                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                            ò
                                                                                                                                                   ò
                                                                                                                                                                          a
```

```
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97] IAAAGAACA FGAATGTAATATAGATGAGGTGAAAAATGTTFFFCAAAAATTFFFAHACG 1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1931 ITTIATGAATTCTCTTGGACTTGTAACATCTAATGGACTTCCAGGGGTGAAAATCTTTC 1090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           271 TAIGAANACIPATCCAACAATFAATGATGTTTTAAATTCAGCAAGTGATCAACCTTCAGA 1330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             091 JAAACGATACGAAGAATITITATICTITAAAAATAAAGATCTAGATGCAAGATITATITTITIGGA 1150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                969 AAAICIGATITCCIATITIAACAACIGCACAGIGAATCCAAAAAGAAAGIAIACIGAAAAG 1028
                                                                                                                                                                                                                                                                   51] GILIGCACICLICAGCAAATIGGAAAGGACATGTGAAMTITATATTTTGAGAGGGGAG 670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         359 TITALLAGGTAAAGGGGAAGTATTACAAATGGAAGATGATGTGGTGATTTCATTTCAGTT 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               429 AATGGTATGIGIGGIGAGIATITIAITAAACICIGAGGTGGCCAIGITGGCICAAAAAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      489 ATATAAAACAGCTGTTATAACATTAATGGTTCACTCGAAGACCGAGGCGAGGTGAGAA 548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.0.9 TAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATTTTATAGC 668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       669 IIIIBIGAATTCTCTTGGACTTGTAACATCTAATGGACTTCCAGAGGTTGAAAATCTTTC 728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      789 TCATGATAAAACTCTTCAGACTGATTCTATAGACAGTTTTGAAACACAGAGAACACGACG 848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     129 IGAGCTACAGAAAAACATAGAAATCAGTGCATAAATTCTTTAACTTACTAAAAGAAAT 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            249 GITTGCACICITCAGCAAATIGGAAAGGACAIGGAACIITATATATITGACACAACCCAG 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VOS PAGITICANTATOTACTICANA FANATICTICANTIFICANA AND TITOTITICATOR SANTES SER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        549 CAGGAGTGCACGGATAGCAAAACAACTAGAAATGATAGAAGAATTATTGAAGTTGTTGT 608
                                                                                                                          Gaps
                                                                                                                                                              9. GGAGAAAGTITCAICTGIGGAIGGAGTATGGGAGGTTATATTCAAAAGGAAAAGGAAGT 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            491 TGAGGIACAGAAAAACAIAGAAATCAGIGICCAIAAAIICITIAACIIAAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                             189 IGATACCAGTACCAAAGTTCATAATGCTATGTCAAGAGTGTTGAAGAAGTATGATGTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                671 CAGITOGATATCTACTCAAATAAATTCTGCAATTGGTGCTAAAAAGTTTCTTGGATCACATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7.29 TAAACGATACGAAGAAATITTATCTTAAAAATAAAGATCTAGATGCAAGATTATTTTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     909 TAFGAAGACTATCCAACAATTAATGATTTTTTAAATTCAGCAAGTGATCAAGGTTGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99.8%; Score 3315; DB 6; Length 4839;
                                                                                                                        0; Indels
                                                                                                  Fred. No. 0,
                                                                                                                      0; Mismatches
/db_xre1-"taxon:9606"
                 880 q
                                                                                                  100.0%
                     905 c
                                                                                                                      Conservative
                                                                                                  Rest Local Similarity
Matches 3315; Conserve
                   1534 a
                                                                               ouery Match
                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                  岩
                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                               -17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
```

```
2351 ATTCAAACGIGTITTIGATCAAAGAAGAGGAGTAIGATTCTATTATAGTATICIAIAACTI' 2410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2049 95TCTLCAGGGAAGAAAAAAAAATTTIIGGAGIAGGTICCAGGGCCCCTAC 2108
                                                                                                                 1351 AGTGAAGGAFATAGGATACATCTTTAAAGAGAAATTIGCIAAAGCTGTGGGAAAATGA
                                                                                                                                                                1089 IGTCGAAATTGGAICACAGGGAIACAAACTIGGAGIICGCITGTAFTACCGAGTAAIGGA 1148
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1269 TAGGAGARATAGATGTGAAAALGIIGAAIIGIGIIIGIGIIIGGGAAAAAA 1328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1329 GAATGTGCTTAATITAAAAGCCITIGATTIIIACAAAGTGATCGAAAGTTTTATCAAAGC 1468
                                                                  1029 AGTGAAGGATATAGGATACATÇITTAAAGAGAAATTIGCTAAAAGGLGTGGGGAGAGGGIG 1088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1749 CTATCHCCGGCTAAATACACTHTGTGAACGCCTHCHGTCTGAGCACCCACAATHAGAACA 1808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1809 TATCATCTCSCACCUTTTTCCACACCCTCCACAAATGAATATAAACTCATGAGAGACACTTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1869 GCATTTGGACCAAATTATGALGTGTTCCATGTATGGCAAAGTGAAAGTAAGAA 1928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1929 CCTTAAATTCAAAATGATTGTAAGAGGATAGAAGGATGTTGCTCATGCTGTTCTTCAGGAGAC 1988
                                                                                                                                                                                         1149 ATCCATGCTTAAATCAGAAGAAGAATTATCCATTCAAAATTTTAGCAAAACTTCTGAA
                                                                                                                                                                                                                                                                                                        11 AICCAIGTIAAAITAGAAGAAGAAGAIIAICCAIICAAAAIITIAGCAAACIIGI
                                                                                                                                                                                                                                                                                                                                                     1209 IGACAACATTTTTCATATCTCTTTATTGGCCTCCTCCTCAGGCTTCTAATGCCACALA
                                                                                                                                                                                                                                                                                                                                                                                                      1571 IGACAACATTTTTCATATGTCTTTATTGGGGGGGGGGTGTTGTATGGGCGACATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1509 PPGARAARAAPTAATGATGAGTIGAATGIGGIIGIGGIGIIAAFGIIAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1629 AACTACGOSTGTAAATTOTASTASAAATAAAAAAAAAGAAAQTGAGGGTTGCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2051 CCAGAAGCCAIIGAAAICIACCCCTITCACTGITIIAIAAAAAAGGGGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1691 GAATGTGGTTAATTTAAAAGGTTTGATTTTTAGAAAGIGATGGAAAGTTTTATGAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1389 AGAAGGCAACTTGACAAGAGAAATGATAAAACATTTAGAACGATGTGAACALCGAALMAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1751 AGAAGGGAAFITGAFAAGAAAIGATAAAAAGAITIAGAAGGATGTGAACATCGAATCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1449 GGAATTTTTGGALGGCICTCAGAITCACCIIIAIIIGAICIIAIIAAACAATCAAAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1689 CCASAASCATTGAAATCTACCTCTTTCACTGTTTAIAAAAAAGTGTATCGGCTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2291 CCTTAAATTCAAAATCATTGTAACAGCATACAAAGSATCTTCCTCATGCTGTTCAAGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ζŎ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ωp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
```

2470	16. 53	2228 2590	2288 2650	2348 2710	2408 2770	2468 2830	2528 2890	2588 2950	2648 3010	2708 3070	2768 3130	2828 3190	2888 3250	2948 3310	3008 3370	3068 3430	3128 3 4 90	3188 3550
FOURTHOUSE GRAND AND STANDARD AND THE GRAND AND THE GRAND AND SECTIONS.	CTESTORCANTACTCACATTCCTCGAAGCCCTTACAAGTTCCTAGTTCACGACGCTTACACGAGTCAGTTCACGACGCTTACAGAGCCCTAGAGAGCCCTAGAGAGCCTAGAGAGAG		FETGOPAAPACDAAPAAAAATGACTCCAAGAATCAAGAATCTTAGTATCAATTGGTGAATC FELLITELETE ELLETTELETELETELETELETELETELETELE	9 ATTCOGRACTECTGAGAAGITECTGAGAAATAAATCAGATGGTATGTAACAGGGGGGGGT 	### CHT **AAAAGAAG GAABGAAGGAAGG FG FAAACGACGGGAAAAAGAAGG FFGA HELLER FELLER FE	######################################	9 GFA BAAACTOSTAGAAATGAPTTOTACTOGAACAGGAATGFAAAAGAGAGAGAAAATGAATGA 111116 HTHELELELELELELELELELELELELELELELELELELE	9 TAGP A LOGALACO CAAACAAAGAAAA IGAGAA ICTICAGGACOTTI GO LOGACACO CONTROL TITLI TITL	FIGURANCE CONTROL TO TOTAL CONTROL AND AN ANALYST AND ANALYST ANALYST AND ANALYST AND ANALYST AND ANALYST AND ANALYST AND ANALYST AND ANALYST AND ANALYST AND ANALYST AND ANALYST AND ANALYST AND ANALYST AND ANALYST AND ANALYST AND ANALYST AND ANALYST AND ANALYST	######################################	POLITICO DA LOCTARCOA TICARA CETACICATICETE ALE ACATICAR EL LE LE LE LE LE LE LE LE LE LE LE LE	AAPTTEGFGFAAAPCGGGCATTTAAAAAGTGGTAGGAGTGGTTGGGGTTGGAAGTA 	429 AAATDOTEGEOTTIAFOGAIAGTAAGAATGGOOGTAGAGGGGGGTOGTGATAACCOAG 288 	OCCUPACIONAL DE CONTROL DE LA PROPOSITION DE LA CONTROL DEL CONTROL DEL CONTROL DEL CONTROL DELLA CO	* TIAATTIAIATSTATTITTITTAAITIAACAGAAACAGCCTTAGAAAATGIGGGCTAGC 	######################################	FORMARIOSALATIATIATASAATIAGAAAAAATIACHATITIAGAGATTAGATTIATI 	PETTACTATTOGAAPCTGATATACTGTGTGTGTTTTATAAAATTTGGAATTTTAATTAA
2411		25.41	144,7	2289 2651	2344	2409	2463 2841	25.23	2951	2649	2794 3071	2769 3131	4141	2889 4251	2343	4009	40.63 84.81	41.2°9 44.9.1
Ē	85 43	25	8 4 5 5	5 3	5 8	50 G	5 3	5 3	5 4	5 4	5 g	\$5 25	55	35	5 3	5 3	5 3	S =

```
Molecular mechanisms of ourogenic mutations in tumors from patients with bilateral and unitateral retinohastoma Proc. Natl. Acad. Sci. U.S.A. 90 (15), 7351-7355 (1993) 93348271
                                                                                                                                                                                                                                                                                                                             PFT 05-MAY 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cowell, J.K. and Raye, F.J.

Partial inactivation of the RB product in a family with incomplete penetrance of familial refineblasoma and benign retinal tumors oncourse of $1, 1321 1326 (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mechanisms of oncogenesis in patients with Lamilial retinoblastomu
Br. J. Cancer 68 (5), 958-964 (1993)
                                                                                                                                                                                                                                                                                                                  neomonalization 4839 bp mERA linear FBL 05-MAY 199 Homo sapiens retinoblastoma susceptibility protein (FBL) mENA and mutations.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Structure and partial genomic sequence of the human retinoblastoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Cramiata; Vertebrata; Enreleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Onadim, 2., Hogq, A., Baird, E.N. and Coweli, J.N.
Oncogenic point mutations in exon 20 of the RBI gene in families showing incomplete penetrance and mild expression of the retinoblastoma phenotype Proc. Natl. Acad. Sci. U.S.A. 89 (i.), 6177-6181 (1992) 92335261
                      3189 TAAAAGCTGGAAGCAAAGTATAACCATATGATACTATACTGAAACAGATTCAT 4248
                                                                                      3249 ACCITCAGAATGTAAAAGAACTTACTGATTTTTTTTTTCATCCAACTTATGTTTTTAAATG 3308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hoppin, Chadim. 2., Raird.P.N. and cowell.J.K.
Detection of heterozygous mutations in the RBI gene in
retinoblastoma patients using simple strand conformation
polymorphism analysis and polymerase chain reaction sequencing
oncomence 7 (7), 1445-1451 (1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6 (sites)
Kratzke.R.A., offerson.G.A., Hodd.A., Coxon,A.B., Geradfs,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                   retinoblastoma protein; retinoblastoma susceptibility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hodg, A., Bia, B., Onadim, Z. and Cowell, J.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mutation data provided by Dr. B.L.Gallie,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (sites)
McGee,T.L., Yandell,D.W. and Dryja,T.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Onadim, Z., Hogg, A. and Cowell, J.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Susceptibility gene
Gene 80 (1), 119-128 (1989)
90006771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hospital for Sick Children
555 Univ. Ave.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens cDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                               L41870.1 GI:793994
                                                                                                                                                                          3309 AGGATTATTGATAGT 3423
                                                                                                                                                                                                                  3671 AGGATTALLGALAGI 3685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (s)tes)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94031584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94203660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1352883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2701949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1452498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8217609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8346255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8152792
                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                      HUMRE I MRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PUBMED
                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MED LINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHOPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEEEKENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOHNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOHRNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL.
                                                                                                                                                                                                                                                                                  RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TILLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TILLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11 I.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                             COURS
                                        <u>a</u>
                                                                                                                            QC.
                                                                                                                                                                          Ś
```

```
/note-"Tumor Gos13 unilateral frameshift mutation resulting in premature stop; Associated with this mutation is a large 13q14 3 sub-band deletion; GOU-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /hote-"Tumor GOS563 unilateral mutation causing premature stop; GU0-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /qene-"RB1"
/cote "lumor GOS559 mutation causing premature stop.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note-"Tumor GOS559 mutation causing prenature stop.:
600-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene-"RB1"
/note "Tumer GOS159 unilateral mutation rausing a
premature stop, GOO-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 3315; DR 9; Length 4819;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. 6;
                                                                                                                                                                                                                                                                                                           /gene-"RB1"
/note-"G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                        /qene="RB]"
/note="G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note-"G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /not e-"G00-118-734"
                                                                                 /not.e-"G00-118-734"
                                                                                                                                                                                                                            /gene="RB1"
/noto="G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /not.e-"G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note-"G00-118-734"
                                                                                                                                                                /not e-"G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /citation-[5]
/replace-"t"
1104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /citation [5]
/replace="t"
1352. .1375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /citation=[5]
/replace="t"
1187. .1264
  /citation=[5]
/replace="c"
638, .676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /citation-[5]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /citation=[5]
/replace="ca"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /replace-"t"
1265, .1352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1265. .1352
/qene="RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1077. .1186
/qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . ৪৪
                                                                /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1469
                                                                                                                                               /genc-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1400. .1401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /number-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /number-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene-"RB1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /tumber-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /number-13
                                                                                                        7number-5
                                                                                                                                                                                   /number-6
                                                                                                                                                                                                           .855
                                                                                                                                                                                                                                                                       /number-7
                                                                                                                                                                                                                                                                                          966
                                                                                                                                                                                                                                                                                                                                                      7number-8
                                                                                                                                                                                                                                                                                                                                                                                                                                   /number-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Mateh
                                                                                                                            exon
                                                                                                                                                                                                                                                                                            exon
                                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CXOD
                                               exon
                                                                                                                                                                                                             exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                          HACE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CXCD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LEOHTLÖNEY FLÄRÜRHLIJG I MACSAVGTCKVKNI DLAFALLI VLAYKULLHAVORTER
VALIK KEEDONDSI TVEYNSVENQKLKI'N LI OYASTREPTI, SEP TEH EPRSBYKEPTSBELL
PGGNI YESPI KSEVR KEGELEPTEKMEPRSILLOSI GESFCTSEKFÖKL NOMYCNSI)
RVLKPSABGSNPPKPLKKLIPPTI EGSPBADGSKHLPABSKFFQKKLABMTSTETERMQKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   71 anstation "MPPKTPKKTAATAAAABPPAPPPPPPPPPPPBBBBBBPPPPP
VRLEPEEPBBPTALCOKLKTPDHVRFRAMLTWERVSSVKGVLGGYTGRKRELWGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TETAAVDIJJEMSFTETEIJGKNIELSVHKFFNIJALITISTAVDAMSKIJAKAVDVIEA
LESKLERTGELIYLTQPSSSISTEINSALVLKVSWITFLLAKGEVLQMEDDLVISFQL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MLOVEDYFIKLSPPMIJKEPYKTAVIPINGSPRTPRROGNRSARIAKOLENDTRITĒV
LOKEHEGNIDEVKNVYFKNEIPFMNSLGLVTSNGLPEVENLSKRYEEIYLKNKDEDAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SPLFDLIKQSKDREGPTDHLESACPI.NI.PLONNHTAADMYLSPVRSPKKKGSTTRVNS
TANAETQATSAFQTQKPLKSTSLSLPYKKVYRLAYLRI.NTI.CERLL.SEHPELEHIIWT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /hote-"Tomor dustw unilatoral mytation causing a tentative wrong splice; due-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Anote-"Tumor 808561 unilateral frameshift mutation causing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LETABLICATE STEET ORTPRESNUBER VNV I PPHT PVRTVMNT I QOLAMILINSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SDOPSENLLISYENNCTVNPRESTLKRVKDIGY LEKEKEARAVGOGCVETGSORVKLGV
RLYYRVMESMLKSEGERUS LQNESKLLINDELEHMSLLACALEVVMATYSRSTSONLDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTDLSFPWILNVLNEKAFDFYKVIESFIKAEGNLTREMIKHLFRGEHRIMESLAWLSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zhote-"RBF64 bilateral familial deletion mutation causing premature stop"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /qene-"RB1"
/hote-"Tumor GOS537 bilateral frameshift mutation causing
                                                                                                                                                                                                                                                                                                                                                                                      /product-"retinoblastoma suspectibility protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          premature stop.; G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                  /3b_Aref "GDB.GCG 118 734"
                                                                                                                                        /organism-"Homo sapiens"
/db_xrel="taxon:9606"
/map="13q14.2"
                                                                                                                                                                                                                                                                                                                                                                                                       /prolein_id="AAB59465.1"
/db_xrei="G1:793995"
                                                                               E-mail: brenda@hafiz.eric.on.ca.
Location/Qualifiers
                                                                                                                                                                                                                                                                                   /note-"G00-118 734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note-"G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /not e-"G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note-"G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KMNDSMDTSNKEEK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      premature stop"
Zeitation-[5]
                                                                                                                                                                                                                                                                                                                                                                       /codon_start-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'replace-"ca"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /ritation-[5]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /replace-"ta"
                                                                                                                                                                                                                          /dene="RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /replace-"t"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            402. .517
/qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Agene "RB1"
                                                                                                                                                                                                                                                                                                                              138. .2924
/qene="RH1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /qene="RB1"
                                                                                                                                                                                                                                                                  /gene="RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /dene="RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         518. .637
/gene="RB1"
Toronto ONT W5G 1X8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /number-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         503
                                      Ph: 416 813-5868
FAX: 416 813-4989
                                                                                                                                                                                                                                                                                                           /mmber-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /number-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /number=3
                                                                                                                                                                                                    .4839
                                                                                                                       .4839
                                                                                                                                                                                                                                             274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                     Canada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Airia! ion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cariation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jariation
                                                                                                                            SOURCE
                                                                                                                                                                                                           100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CXON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11COX++
                                                                                                                                                                                                                                                 UOX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            :XOE
                                                                                                                                                                                                                                                                                                                              У.
:-
                                                                                                      7.1.4.1.1.4.1.4.
```

Σ	ches	hes (415; Conservative 0; Mismatches 0; Indels	0; Ga	() sdi
% 50 43	4,	GRAGAAAGITICATCIGIGAAGAAGIATIGAGAAGITATATATATATATATATAT	AGGAACT 	68 430
5 1	6.9	-	CTTTTAC	128
3 3	12.4		AAGAAAT	490 188
÷	4.51		AAGAAAI	550
5 2	183	189 TGATACCAGTACCAAAUTIGATAATGCIATGIGAAGACTGITGAAGAAGTATGAIGIATT 	ATGTATT	248 610
45	243	249-CHTGCACHTGACAAAHGGAAAGGAAGGAACHGBAACHAATATHGACAAGCCAG HTFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	AACCCAG 	408
5 £	£03 £7.1		FCACATT HIIIIII FCACATT	368 730
9 =	7.41		TTCAGTT TCAGTT	428 790
40 40	741	429 ANTOCIA POTOTO FICANCIALITA ITANA OTOCOCOCOCOMO TOTOTOTOTO CONTOA ANTOCOCOCO TOTOTOTOTOTOTOTOTOTOTOTOTOTOTOT	AAGAACC NAGAACC	488 850
8 G	4 8 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	489. ATATAAAACASATTATACOSTITAATGGITCACCICGAACACCCAGOCGAGGICAGAA TITTITITITITITITITITITITITITITITITI 851. ATATAAAACAGCIGHITATGCATHAATGGITCACCICGAACACCCAGGCGAGGICAGAA	STCAGAA FILLILI STCAGAA	548 910
5 B	543	549. CAGGAGTGCACGGATAGCAAAACTAGAAAATGATACAAGAATTATTGAAGTTCTCTG 	FICTOTG HILLI FICTOTG	608 970
65 E	609 171	609 TAAAGAACALGAALGTAATALACALGGGGAAAAALGTTTATTTGAAAATTTTATACC TITTTTTTTTTTTTTTTTTTTTTTTT	HITATACC HITTITI	668 1030
5 3	663 10.41	669 THTPATGAATTCTCGAACTGTAACATCTAATGGACTTCCAGAGGTTGAAAATCTTTC THEFFILLE HELLE GAGAGGTTGAAAATCTTTC	ATCTTTC 	728 1090
5 3	729 1091	729 IAAACGAIACGAAGAATITAECTIAAAAIAAAGATCTAGATGAAGAAAAAATTIGA 	TTTTGGA 	788 1150
5 3	789 1151	789 - FCA GATAAACTO FCAACTGA FCLA FACACITTI IGAACAACAGAGAACAGG FEETELLI FEETELLI FEETELLI HELLE FEETELLI HELLE HELLE HELLE FEETEL 151 - FCA GATAAAACTO FCAGACTGA FAGACAGTTI IGAAACAGAGAACAGG	SACCACG HILLII MCCACG	848 1210
5 2	1211		SGACTGT SGACTGT	908 1270
55 141	563	7 - T	STTCAGA HILLIII STTCAGA	968 1330
- 48 - 48	969	969 AAATCHGALTICCTALTITAACAACHGCAGAGGAATCCAAAAGAAGTALACHGAAAG FEELHTITTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	rgaaaag Fgaaaag	1028 1390
5 8	1029	29 AGT	AGGGTTG	1088
ì				~

```
2291 CCTTAAATTCAAAATCATTGTAACAGCATACAAGGATCTTCCTCATGCTGTTCAGGAGAC 2450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2471 CTTGTCACCAATACCTCACATTCCTCGAAGCCCTTACAAGTTTCTACAAGTTTACACGTTACAC
                                                                                                                                            1209 TGACAACATTTTTCATATGTTTTATTGGCGTGCGTCTTGAGGGTTGTAATGGCCACATA 1268
                                                                                                                                                                           1571 TĞACAACATTITLEALALGICİTTALIGGEGIGÇGELETIGAĞÜLIGLAALGGELACALA 1630
                                                                                                                                                                                                                                                                                                                                                       1389 AGAAGGCAACTTGACAAGAGAAATGATAAAAACATTTAGAAACGATGTGAACAACAATCAT 1448
                                                                                                                                                                                                                                                                                                                                                                                                                                             1871 GCGAGAGGACCAATGAFGACGFTGAAFGTGFGTGTGTTAAFGTFPGTCTGAGAA 1930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2111 CLATCICCGGCTAAATACACTITGIGAACGCCTICTGTGTGTGCCCAGAATTAGAACA 2170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1809 TATICALCEGGACCETT ECAGCACACCCEGCAGAATGAGTATGAACTCATGAGAGACACT 1868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2171 TATCATCTGGACCTTTTCCAGCACACGGGAGAAIGAGIAIGAACIPAIGAGAGACAG 2230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1929 CCTTAAATTCAAAATCATIGIAACAGCATACAAGGATCTTCCTCATGTTCAGGAGAC 1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2109 CTTGTCACCAATACCTCACATCCTCGAAGCCTTACAACHTICCLACHTCACCHTACG 2168
   1089 TGTCGAAAFTGGATCACAGGATACAAACTTGGAGTTGGTTGTAFTACGAGTAAATGGA TTA8
                                                                      1149 AFCCATGCTTAAATCAGAAGAAGGATTATCATJCAAAATTITAGCAAACTTCTAA 1208
                                                                                                                                                                                                            1269 TAGCAGAAGTACATCTGASAATCTTGATTCTGGAACAGATTTGTCTTTCCATGGATTCT 1328
                                                                                                                                                                                                                                                                                    1329 GAATGEGGTTAAFFFAAAGGGTTTGATTTTTACAAAGEGATGGAAAGTTTTALCAAAGE 1388
                                                                                                                                                                                                                                                                                                                                                                                                                             1449 GGAATGCCTTGCALGGCIGTCAGATTCAGCLLIALLFAIGHIALLAAACAALCAAAGA 1508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1509 CCGAGAGGACCAACTGATCACCTTGAATCTGCTTGTCTCTTAATCTTCCTCTCTAGAA 1568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1629 AACHAGGGGTGTAAATTGTAGTGCAAATGCAGAGGAAGGTAGGAAGGTGTGGAGAA 1688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1689 CCACACCATTGAAATGTAGGTGTGTTTGACTGTTTTALAAAAAAGTGTATGGGCTAGC 1748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1989 AFTCAAACGIGIITIGALCAAAGAAGAGGAGIAIGALLATAITATAGIALLATAACHU ZUAB
                                                                                                                                                                                                                                                                                                                                                                           1511 ATCCAIGCITAAATCAGAAGAAGAACGATTAICCAITCAAAATTITAGCAAAATTICTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1869 GCATTTGGACCAAATTATGATGTGTTCCATATATGCATATGCAAACTAAAGATATAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2049 GOTOTTCATGCAGAGTGAAAATALTTTGCAGTATGCTTTCAGGTTCAGGCCCCCTTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90
                                   qa .
                                                                       Š
                                                                                                   3
                                                                                                                                          ŝ
                                                                                                                                                                         3
                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                  ें
                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \frac{5}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
```

```
SOURCE
                                                                                                                                                                                                                                           ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          윤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   싎
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            aa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
2541 GATTOGTGGAGGGAAGATGTATATTTGACCCCTGAAGAGTCCATATAAAATTTCAGAAGG 2590
                                                                                                                                                                                                                                                                                                                                                                    2289 ATTOCCIONACITOTONIA ANTICONIA  ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONICA ANTICONI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2469 PORGAMATIGGONGANATGACTICINGIGGANGACIGGANANAGGANANAGANTGANTGA 2528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2589 IGIACACICISTALICALISTCICIOACARISTANTATATAACTITOTO 2548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27() 9 monthology of the programme and the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programment of the programm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4071 TGITIGGGIGATIONIAAGONACTIGAAATGITAGICATIGITATITATACAAGAITGAA 3130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5/0/9 TATCTICCAAATGCAATTTGATTGACTGCCCATTCACCAAAATTATCCTGAACTCTTCTG 3068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5431 CANAAATGGATATTAGAAATTAGAAAAAAAATTACTAATTTTACACATTAGATTTTAT 3490
                                                                                                                                                                                                                                                                                                2229 TCTGBBBAACACACAAAAAATGACTCCAAGAAGATGATCTTAGTATCAATTGGTGAATC 2288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2651 ATTCGGGACITCTGAGAAGTTCCAGAAAATAAATCAGATGGTATGTAAAGGACGACGTGT 2710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2343 GOLCAAAAGAAGTGGTGAAGGAAGCAACCCTCCTAAACCACTGAAAAAGTAGGCTTTGA 2408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2891 TAGGATAGGATACCTCAAAGAAGAAGAAGAATGAGATCTCAGAATTTGAGATATAGAAAAAAA 2450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2649 ITTATGGGGGACATITAATATGTTGAGGTGTTTTTGTGGAATATAAAADGGGGGCACATTAAAAT 2708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4011 TITATGGCCACAITTAATAICITCAGCICTTTTTGTGGATATAAAAFGGAAFGAAAAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2769 AATGITGIAAAAICCIGGGAIIIAAAAAAGITGIAGGAGAIIGIIIGGIGIGIGGAAAGIA 2828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3131 AALCTEGEGEAASECEEGCATTTAAAAAGTTEGFAGCAGATTGTTEGEFGTTCCAAAGTA 3190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2829 AAATTGSTGTGTTTATGGATAGTAAGAGGGGGTAGAGTGGGAGLGCDGATAAGGSAG 2888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3251 GCCIGICIGACIATGCCIICITIIGIAGCAIAIAGGIGAIGIIIGGCICIIGIIIIA 3310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2949 ITAATITATATATSTAITI111AAITIAACATGAACACCITAGAAAAIGIGICIAIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3069 GAAAAATGGATATTATTAGAAATTAGAAAAATTACTAATTTTAGACATTAGATTTTATA 3128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    $129 ITTACIATIGGAATCTGATATACTGTGTGTTTTATAAAATTTTGCTTTTTAAAA 3188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3189 TAAAAASTGGAAGGAAAGTATAAAGCATATGATATATATATATATAGTAAGAAAAGAAATTGAT 3248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3249 ACCICANAAIGTAAAAGAACTTACTGATTATTTTTTTTCGAACTTTATGTTTTTAAATG 3308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3551 TANAAGCTGGAAAGCAAACTATAACCATATGATACTACTACTGAAACAGATTTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \hat{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
```

```
..
O
                                                                                                                                                                 PAT 02-DEC-1994
609 TAAAGAAGAIGAATGIAATATAGAIGAGIGAAAAAIGIITATTICAAAAAIIIIAIAOOO 658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       369 TITATITAGCTAAAGGGGAAGTATTACAAATGGAAGATGATGTGGTGATTTCATTTCAGTT 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      594 TTTATTAGCTAAAGGGGAAGTATTACAAATGGAAGATGATGGAGTCTGGTGATTTCAGTT 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9 GGASAAAGITTOATFITGRAIGGAGITATTGGGAGGIIAIAITGAAAAGAAAAAGGAACI 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             249 CITTGCACTCTTCACCAAATTGCAAAGGACATGTGAACTTATATATTTGAGAGAAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       509 CASTICGATATCIACIGAAAIAAATICIGCATIGGIGCTAAAAAGITICIIGGATCACAIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        429 AATGCTATGTGCCTTGACTATTTTATTAAACTCTCACCTCCCATGTTGGTGAAGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.29 TGAGCTACAGAAAAACATAGAAATCAGTGTCCATAAATTCTTTAACTTACTAAAAGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         189 TGATACCAGTACCAAAGTTGATAATGCTATGTCAAGACTGTTGAAGAAGTATGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P94 GEGGGGAAFFERENTIIATES WE'NSTESACHASALGAGAIGGGGGGCTIACH
                                                                                                                                                                                                                                                                                                                                                                                                                                                            99.7%; Score 3313.4; DB 6, Leagth 4597;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           retinoblastoma
                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                          Dryja,T.P. and Friend,S.

Bimon DNA in the Alaquesis of retinot
Patent EP 025931-A2 1 09-MAR-1988;
Location/Qualifiers
1. 4597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                          Sequence 1 from Patent EP 0259031.
105311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No.
                                                                                                                                                              4597 bp
                                                                                                                                                                                                                                                                                                                                                                                            /orqanism-"unknown"
                                                                                                                                                                                                                                                                                                                                                                                                             812 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.08;
                                                                                                                                                                                                                                                                              Unclassified.
1 (bases 1 to 4597)
                                                                                                                                                                                                             105311.1 G1:591083
                                              3309 AGGATTATIGATAGT 3323
                                                                               3671 AGGATTATTGATAGT 3685
                                                                                                                                                                                                                                                                                                                                                                                                            842 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 3314; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                            1489 a
                                                                                                                                                                                                                                             Unknown.
                                                                                                                                                                                                                                                                Unknown.
                                                                                                                                                              105311
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hest Local
                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                             REPRENCE
                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                              KEYWORDS
                                                                                                                               RESULT 4
                                                                                                                                                                                                                                                                                                                                                             FEATUPES
                                                                                                                                                                                                              VERSION
                                                                                                                                              105311
                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
```

¥ 5 ¥	728 953	788 1013	848 1073	908 11+3	968 1193	1028 1253	1088 1313	1148	1208 1433	1268 1493	1328 1553	1388 1613	1448 1673	1508	1568 1793	1628 1853	1688 1913	1748
TANA BAN'A BIANTO TANTO TANTO TANTO TO TO TO THE TOTAL AT TANANA TO THE TANANA AT THE TOTAL AT TANANA AT THE TOTAL AT TANANA AT THE TANANA AT	HITTALGAALICHCHOOQACHOLAACAICHAHGACHCCAGAGGHGAAAATCTTC HITTITTITTITTITTITTITTITTITTITTITTITTITT	TAAAGSATA/GAAGAAATTAT/TTAAAAATAAAGTCTAGATGCAAGATTATTGGA FELLELLELLELLELLELLELLELLELLELLELLELLELL	TO A LOAD ANA AND TOTATO AS AND TOTATADA OF A STATE OF ANA CACARACT AND THE STATE OF THE STATE O	AAAAAQIAACO IIGA IIGAAGAGO IGAA IBIGAA IPOOTO ACACACA OO CAGTIA GGACIGO IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	TATGAACACTATCCAACATTAATGATGATTTAAATTCAGCAAGTAAGACGTTCAGA 	AAA FCTGATT FCCTATTTAACAACTGCACAGGATCCAAAAGAAAGTATACTGAAAAG 	ACHGARGA ATAO DATARA ANG TELAAA GAGAA ATTOO TAAA GOOD GOGA GAGGATTOO TAAA GAGAA ATTOO TAAA GAGAA GAGAA GAGAAA GAGAAA GAGAAA GAGAAA GAGAAA GAGAAA GAGAAA GAGAAA GAGAAAA GAGAAAAA GAGAAAAA GAGAAAAAA	DEFORMATIONA POGATACAAACITORAGIICOOTIGIATIAACGAGIAATGGA 	A FCYALGY TRAAATCAGAAGAAGAATTATGCATTACAAAATTTTAGGAAACTTCTGAA FTH	TGACAACATITTCATATGTCTTTATTGCGTGCCTCTTGAGCTTGTAATGCCGCACATA 	TARCARAACTACTOR ANATOTTGATTCT GAARCAGATTGGGTTTCCCATGGATTCT 	GAATGEGTTAATTTAAAAGCCTTGATTTTACAAAGEGGGGGGGGTTTTAACAAAGC 	AGAMBRAAT FRATAARARAGAARAAGALAHAA HAHAA HAHAA HAHAA KAAARAA MAAARAAAGAA GAAARAA AAAAA AAAAAAAAAA	GRANDOCTEGROSGECTORANTCARCITIANTERACETATARACATORANGA FILETELLE LELLE LELLE LE LE LELLE LE LE LE LE	OSARANGACAA DATOACTIGAACHGAALCHGIGECECTAAACTECTCCTCCAGAATTITTTTTTTTTTTTTTTTTTTTTTTTTT	HAATEACETE AGEAGA AGTALCHICHCHOLIAAGATCHCAAAGAAAAAGGTC FELLELLELLELLELLELLELLELLELLELLELLELLELL	ANTIANGO BUTAAATICTACTOCAAATGA AGACAACAAACAAACTOAGCATCAGAC TESSELLE TELLET TELLET ELETELE ELETELETELETE	C'NSARGCATTGAAATCTACCTCTTTCACTGTTTTATAAAAAAGTGTATCGGCTAGC
н 14	669 894	954	789 1°14	849 1074	11.84	965 1194	1029	1089	1149	1209	1269	1329	1389	1449	15.09	1569	1629	16.83
40	\$ 42 5 42	5 4	5 3	5 3	5 <u>a</u>	5 ±	5 3	5 £	5 3	O.Y Ext.	5 3	5 3	5 3	5 3	5 3	55 25	Ŷ <u>₹</u>	5

```
2334 CITGLEH HILLEH STAGEL GAN 3-2393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2394 GATTCCTGGAGGGAAGATCTATATTTCACCCTGAAGAGTGTATATAAAATTTCAGAAGG 2453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2754 TAGGATGGATACCTCAAACAAGGAAGAGAATGAGATCTCAGGACTTLGGTGGACACTG 2813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2814 TGTACACCTCTGGATTCATTGTCTCTCACAGATGTGACTGTATAACTTTCCAAGGTTCTG 2873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2994 AATCITGTGTAAATCCTGCCATTIAAAAAGTGTAGAACATTGTTTCCTCTCTCCCAAAGTA 4053
1914 CCAGAAGCCATTGAAATCTACTCTTTCACTGTTTAIAAAAAAGTGTAT 'GGCTAGC 1973
                                                                                                                                                                                                                                                              1929 CCTTAAATTCAAAATCALTGIAACAGGATAMAAGGATGTTGCTGATGCTGTTMAGGAGATAN 1988
                                                                                                                                                                                                                                                                                                                                        1989 ATTCAAACGIGTTTGAICAAAGAAGAAGAGIAIGATTCIAITAIAAGIATTIAIAAAT 2048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2169 GATTCCTGGAGGGAACATCTATATTTCACCCTGAACAGTTCATAAAATTTCAAGG 2228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2289 ATTCGGGACTTCTGAGAAGTTCCAGAAATAAATCAGATGGTATGTAACAGGGACTTGT 2348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2529 TAGGATAGGTACCTCAAACAAGGAAGAAAAIGAGGAICTCAGAACCTTGGTGGACACTG 2588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2649 TITATGGCGCACATTIAAIAICTCAGCICTITICGGGATAIAAAAIGGCAGAGAAI 2708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2709 TGTTTGGGTGATTCCTAAGCAGTTGAAATGITAGTCATTGTTATTATATATATATAGAA 2768
                                                                                                              1809 TATCATCTGGACCCTTTTCCAGCACACCCTGCAGAATGAGTATGAACTCATGAGAGACAG 1868
                                                                                                                                                                                       1869 GCATTTGGACCAAATTATGATGTGTTGCATGTATGGCAAATTGAAAGTGAAGAATAGA 1928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2229 TCTGCCAACACAAAAAATGACTCFAAGATFAAGAATGTTAGTATGAATTGGTATTGGTGAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2469 GCAGAAACTGGCAGAAALGACTTCTACTAGAAGAAAAGGAAAAAGGAAAAAGAAAAALGAALAA 2528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2769 AATCTTGTGTAAATGCTGGGATTTAAAAGTTGTAGGAGATTGTTGCTGTTGTAAGTA 2828
                                       1749 CTAICICCGGCTAAAFACACTFFGTCAACGCTTCTGFFGAGGCACCCAGAAFFAGAACA 1808
                                                                                                                                  2109 CTTGTCAACAATAPPTGAGATTPCLEGAAGACATTAGAAGTTTPCTAGTTAAAATTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2454 TCTGGGAACACGAACAAAAATGACTGCAAGATGAAGAAGTGTAAGTGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2589 TGTACACCICIGCALICALICICICACACACA ISTCACICIALAACTILICACAGTICIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2049 GGTGTTCATGCAGAGAGTGAAAAGAATATTTGCAGTATGCTTCCACSAGGCSGCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                         <u>a</u>
                                                                                                              Ś
                                                                                                                                                2
                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                \overset{\circ}{\nabla}
                                                                                                                                                                                                                                                                                                č
                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                       <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                 ^{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ĉ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \dot{\varsigma}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ်
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <del>Q</del>
```

```
linear PAT 02-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .;
O
             2889 GCCTGTCTGACTACTTTGCCTTCTTTGTAGGATATAGGTGATGTTTGCTCTTGTTTTTA 2948
                                                                                                                                                                                                                                        1989 TAAAAAGTIGGAAGCAAAGTATAAGCATATGATACTATCATACTACTGAAACAGATTTCAT 3248
                                                                                                                                                                                                                                                                                                                                                                                                                                                               2829 AAATTGTGTGTFFAGGATAGTAATAATGGCCTAGAGTGGGAATCCTAATAACCAG 28KB
                                                                                         2.449 IIAAITIAIAIGIAIATHTTTTAATITAACAIGAACACCCTTAGAAAATGIGTCCIATC 3008
                                                                                                                                                                                  41.24 IIAAIIIAIAIGIATATITTIITTAAFIITAACATGAACACCCTTAGAAAATGIGICCTATC 3233
                                                                                                                                                                                                                    AND TAIGH FACAMAIGCMATH IGMITIGACHGCCCMTTCMCCAMAMTATCCTGMACTICTTG 3068
                                                                                                                                                                                                                                                                                              3.29 IIIACIATTGGAATCTGATATACTGTGTGTGTTTAIAAAATTTTGCTTTTAATTAAA 3188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    47.4 ACCICAGAAAGIAAAAGAACTTACIGATTATTTTTCTTCATCCAACTTATGTTTTTTAAATG 3533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3449 ACCICAGATGLAAAAGAACITACIGATTAFFFFTTCATCCAACITATGFFFFTFTAAATG 3308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.4. GGAGAAAHTTTOATOTOTOTOANITATTOOGAGGTTATATATTOAAAAAAAAGGAACT 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.9 G1GGGGAATCTGTATCTTTATTGCAGGAGTTGAGGTAGATGTGGGTTGGCTTTTAG 12.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          234 SIGGGGAAICIGIAICLIIALIGCAGCAGITGAANIAGAGARGEGGITCACIITIAC 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 129 TGAGGTACAGAAAAAQALAGAAALCAGLGCATAAATTGTTTAAGTTACTAAAAGAAAT 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gabs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9 3GAGAAAGTTTCATCTGTGGATGGAGTATTGGGAGGTTATATTCAAAAGAAAAAGGAACT 68
                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99.7%; Score 3313.4; DB 6; Length 4597;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and Yandell, D.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    813 g 1454 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #397 pp
Sequence | from Patent WO 8906703,
109369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4597 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Prod. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism-"unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DIÁGNOSIS OF RETINOBLASTOMA
Patent, WO 8906703 A 1 27 JU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     l (bases 1 to 4597)
Dryja.I.P., Friend,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           109369.1 01:587899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      841 ⊖
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           **** AGGATTATIGATAGT 3323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3534 AGGALLALLGALAGT 3548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mat thes 3314, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1485 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unknown.
Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63860I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
FORNAL
FEATORES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N ... XX... X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KISIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  田室田子
                                                                                                                                               Ŝ
                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                     ...
                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                         Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ....
```

```
1149 ATTOCATIGETTTAAATGAGAAGAAGGATTTATGEATTETAAAATTTTTAGGAAAGTTETGAA 1208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1029 AGTGAAGGATATAGGATACATCTTTAAAGAGAAATTIGGTAAAGGTGIGGGACAGGGTIG 1088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1089 INFEGAAAFFGGALCACAGGAFACAAACFFGGAGFFGGCFFGFAFFACCGAGTAAFFGGA 1148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1374 AFCCATGCTFAAATCAGAAGAAGAACGATFAFCCATFGAAAAFTTFAGGAAACTTGGAA 1433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1209 TGACAACATTTTTCATATGTCTTTTATTGGCGTGCTCTTGAGGTTGTAATGGCCACATA 1268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        954 TAAACGATACGAAGAAATTTATCTTAAAAATAAAGAICIAGAAGAIGAAGAITATTTTGGA 1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         549 CAGGAGTGCACGGATAGCAAACAACTAGAAATGATAGAAGATTATTGAAGTTCTFTG 608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           894 TTTTATGAATTGTTGGAGTTGTAACAIGTAAIGGAGIICCCAGAGGIIGAAAAIGIIIG 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    729 TAAACGATACGAAGAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTATTTTGGA 788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 489 ATATAAAACAGCTGTIAIACCCA11AATGGIICACCTGGAACACCCAGGCGAGGTGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               909 TATGAACACTATCCAACAATTAATGATTTTAAATTCAGGAAGTGATGACGACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   189 TGATACCAGTACCAAAGTTGATAATGCTATGTCAAGACTGTTGAAGAGTALGATGTALL
                                                                            219 CHITTOPACHOTTOPACCAAATTOCAAAGGACATGTGAACTTATATTTTGACAAAGGAG
                                                                                                                                                           309 CAGTICGATATCTACTCAAATAAATTCTGCATTGGTGCTAAAAGTTTCTTGGATCACATT
                                                                                                                                                                                                                                                                                   594 ITTATTAGGTAAAGGGGAAGTATTAGAAAIGGAAGATGATGIGGTGAIITGAITICAAII
                                                                                                                                                                                                                                                                                                                           429 AATGCTATGTGTCGTTGACTATTTTATTAAACTCTCACCTCCCATGTTGCTCAAAGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                 714 ALATAAAACAGCIGTTATACCCATTAATGGTTCACC CGAACACCCAGGCCAAGICACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      609 TAAAAGAYGAAYGTAAYATAGAYGAGGTGAAAAATGTYTATYYGAAAAYLIYTALAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       669 ITTIAIGAATICTCTIGGACTIGIAACAICIAAIGSACIICCAGAGGIIGAAAAICITIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  849 AAAAAGTAACCTIGAIGAAGAGGIGAAIGIAATIOCICOACACACCCCAGTIAGGACTGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1134 TATGAAGACIAIGGAAGAATIAATGATTTTAAATTGAGGAAGTGATGAAGTTTGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              869 TTTATTAGOTAAAAGGGGAAATTAAAAATGGAAGATGATGTGGGTGATTTGATTTGAGT
                                                                                                                                                                                                                                                                £
                                                                                                                                                                á
                                                                                                                                                                                                                                            ें
                                                                                                                                                                                                                                                                                 윤
                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                 QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
```

TTTCCATGGATTCT 1328 11 (2 1 1 1 1 1 1 1 1 1	17 16 18 16 17 17	SAATTAGAACA 1808	204 227 210 233 233 239	AFATAAAATTTCAGAAGG 2228 HILLILILILILIIII AFATAAAATTTCAGAAGG 2453 ACTATCAATTGGTGAATG 2288 HILLILILILILIIIII AGTATCAATTGGTGAATG 2513 ATGTAACAGGACGGTGT 2548 HILLILILILIIIIIIIIIIIIIIIIIIIIIIIIIIII
TAY TAYAN THE TOTAL CANADEST TO THE TOTAL	EDITION TO THE FILL THE FILL HELLE H	CHAIT PRODCITAAATACAMTTMINGAACGCTTCTGTGTGTGTGCCCAGAATTAGAACA CTATELLI HELLE HE	ATTCAAA'' STOTTTGATCAAGAAGAGATTGATTGTATTATAGTATTGTATAAGTGTATAAGTGTATAAGTGTATAAGTGTATAAGTGTATAAGTGTATAAGTGTATTGTATAAGTGTATAAGTGTAAAGTGGTATGTATTGTAAAGTGTAAAGTGTGTGTATTAAGTGTTGT	GATTOTTOGRADISANCATOTATATTTCAPOCETGAGGACTCCATATAAAATTTCACAAGGACTTTTTTTTTT
1269 1494 1329 1554 1389 1614 1649 1674	1744 1569 1794 1629 1854 1914	1974 1974 1809 2044 1869 2094 2154	2214 2214 2049 22109 2444	2169 2334 2223 2454 2289 2514 2349
\$ 2 5 2 5 2 5 2 5	8 8 8 8 8	5 8 5 8 5 8 5 8	5 5 5 5 5	5 2 5 2 5 2 5

```
2934 IGITTEGGGTGATTCCTAAGCCACTIGAAAIGTTAGTATTATATATATAAAATIGAA 2993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2994 ANICITGICIANANICCIGCCATITANANGIIGIACCAGAITGIIICCICTICCAAAGIA 4053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                + 5 + +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2529 TAGGATGGATAGCTCAAAGAAGAAGAAATGAGAGATGTGAAGACCTGAGGA ACTG 2588
                                                                                                                                                                                                                                                                      2589 TGTACACCTCGGATTCATTGTCTCACAGALGTGACTGFATAACTTTCCAGAGTTCTG 2648
                                                                                                                                                                                                                                                                                                        2814 IGTACACCTCTGGATTCATTGTCTCTCACAGATGTGACTGTAACTTTTCCCAGGTTCTG 2873
                                                                                                                                                                                                                                                                                                                                         2649 TITATGGC ACAITIAAIAICHCAGCICHHIGGAAIAIAAAAIGIGCAGATAAAT 2708
                                                                                                                                                                                                                                                                                                                                                                                                               2709 TGTTTGGGTGATTCCTAAGCCACTTGAAATGTTAGTCATTGTTATTATACAAGATTGAA 2768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2769 AAICTIGIGIGTAAAIGGIGGCAIIIAAAAAGIIGIAQAAAAIIGIIIGGIGTGAAAAAA 2828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2829 AAATTGCTGTGCTTTATGCAIAGTAACAATGGCCCTAGAGTGGGAGTCCTGATAACCCAG 2888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2889 GCCIGICIGACIACITIGGCTICITIIGIASAAAAAAAAAAAAATIGATIGITATITA 2948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3174 TTAATTTATATGTATTTTTTTAATTTAACATGAACACOGGGAAAAALGLGGGGGTATC 3233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3009 TATCTTCCAAATGCAATTTGATTGACTGCCCATTCACCAAAATTATGCTGAACTCTTG 3068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8069 CAAAAATGGATATTATTAGAAATTAGAAAAAAAAATTACTAATTTTACACATTAGATTTAT 3128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3354 TITACIATIGGAATCIGATAIACHGIGTGCITTAIAAAAIITIGCIITTAAITAAA 4413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3189 TAAAAGCTGGAAGCAAAGTATAACCATATGATACTATCATACTACTAACTGAAACAGATTTCAT 3248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3414 TAAAAGCTGGAAAGGAAAAGTATATGATATTATPITATTACTAGAAAAAATLEVAL 3473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3249 ACCICAGNATGTANAAGAACITACIGAITATITICITCAICCAACITATGITTIAAAIG 3308
                                                                                                                                                              3129 TITTACTERINGAATCTGATATACTGTGTGTGTGTGTGTGTGAAAFTTGGGTGGATTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3294 CAAAAATGGATATTATTAGAAATTAGAAAAAATTACTAATTTAGACATTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3309 AGGALTALLGAFAGT 3323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3534 AGGATTATTGATAGT 3548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          а
Д.
                                                        Š
                                                                                      â
                                                                                                                                                          ä
                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                      â
                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   급
                                                                                                                                                                                                  ć
                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
```

Tinear PRI 12 JIII, 1995

nominos Bunhan retinoblastoma susceptibility mRNA, complete eds. M15400

DEFINITION

RESULT 6 HUMRES

FOGR

```
õ
                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                              1 (bases 243 to 4740)
Lee,W.H., Bookstein,R., Hong,F., Young,L.J., Shew,J.Y. and Lee,E.Y.
Human retinoblastoma susceptibility gene. cloning, identification,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VRLEFEETEEDDETALGONLA FRANKLERAMLEWEKVSSVOGVLÄGT LÖKKKELMGTC
TETARVOLDEMSETLLSYRKTYBISVHKEENLLKEIDTSTKVONAMSKLLKKYDVLEA
LESKLERTGELJALTGESSSISTETINSALVLKVSWITFILAKGEVLÖMEDDLVTSFGL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOKEHEGIIDEVKNOVFKNETPPMISLALSTSNALPEVEN: SKEYEETYLKNEG FPR
LELDHDKTLQTDSTDSFETQRTPRKSNLDEEVNITPPPHTPVRTVMNTTQQLMMILNSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /translat.ion-"MPPKTPRKTAATAAAAAEPPAPPPPPPPPEDPEQDSGPEDLPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MLOVIDYFIKLSPPMILKEPYKTAVIPINGSPRTPRROQNRSARIAKQLENDTRIIEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SDQPSENLI SYFNNCTVNPKESILKRVKDIGY FFREFFARAVGGGCVEIGSGRYKLGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RLYYRVMESMLKSERERE,STQNFSKLLINDNIFHMSLLACALEVVMATYSRSTSONLDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTDLSFPW1LNVLNLKAFDFYKV1ESF1KAEGNLTREM1KHLERCEHR1MESLAWLSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SPLFOLIKQSKDRROPTDHLESACPLNI PLONNHTAADMYLSPVRSPKKKGSTTRVNS
TANAETQATSAFQTQKPLKSTSLSFLFYKKYYPLAYLELNTLCFFLLSEHPELEHIIWT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LFQHTLQNEYELMRORHLDQIMMCSMYGICKVKNIDLKFKIIVTAYKDLPHAVQETFK
RVLIKEEEYDSIIVEYNSVEMQRLKTNILQYASTRPPTLSPIPHIPRSPYKFPSSPLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPGGNIY1SPLKSPYK1SEGLPTPTKM1PRSR1LVSTGESFGTSEKPQK1NQMVCNSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RVLKRSAEGSNPPRPLKKLRFD1EGSDEADGSKHLFGESKFQQKLAEMTST-KTKMQKQ
                                                                                                                                                                        Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Praft entry and computer-readable copy of sequence in [1] kindly
provided by P. Heokstein, 27-APR-1987.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   69 | GIGGGGAALCHGIALCHHALITHETH | WATTGACCHAGAGATGTCCHTCHTTTTT | 128 | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | HTTH | H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 172 MAGAAAGIIICAICIGIGGATGGAGFATTGGGAGGFTATTFCAAAAGAAAAGGAACT 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9 GGAGAAAGTITCAICTGTGGATGGAATHGGGAGGTIAIAITCAAAAGAAAAAGGAACI 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lee, E.Y., Bookstein, R., Young, L.J., Lin, C.J., Rosenfeld, M.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Molecular mechanism of retinoblastoma gene inactivation in retinoblastoma cell line \gamma 79 Proc. Mail Arad Sci. U.S.A. MS (16), Golf GO21 (1988)
                                                                                                                                                                                                               Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                  Homo sapiens (clone, RB [1,5]) foetus retina cona to mana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1038 bp upstream of EcoRI site; chromosome 13q14.1-q14.2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48 78; Severa 3280 B; DR 9, Tength 4740;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note-"retinoblastoma susceptibility protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7; Indeln
                                                                                                                                                                                                                                                                                                                                                                                                                  Serience 235 (4794), 1394-1399 (1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1483 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_aret-"GDB.G00 118:734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /protein_id-"AAA69807.1"
/db_xref-"GI:190959"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism-"Homo sapiens"
/db_xrof-"taxon.ukn6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="kB-11,51"
/tissue_type="retina"
MIS400.1 G1:190958 retinoblastoma susceptibility.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Localion/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ev Stage "Loetus"
.4740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /product-"rbs mRNA"
139. .2925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  862 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KMNDSMDTSNKEEK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /map-"13q14.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /codon_start-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /dene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /dono-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 480)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  887 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .4740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ,de,
                                                                                                                                                                                                                                                                                                                                                                                        and sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rest Local Similarity
Matches 4407; Conserva
                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1508 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                             87149066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88320373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOC.W.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1823889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3413073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CONTRA MATCH
                                                                                                                             - ROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE CHUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDILINE
PURMED
                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                  AUTHERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHURS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1+1(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AN A
                                               KEYWSELS
                                                                                                                                                                                                                                                                                                                                                                                                                           UNENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PURMIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1)8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES.
                                                                                                                                                                                                                                                                                                                                        11111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11.1.1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INGIMM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NISIX
                                                                                  SHUKCL
```

```
1.387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                971 GTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAAFTTTATAC 1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1151 ATCATGATAAAACTCTTCAGACTGAIGIAIAGACAGHIIIGAAACACACAGAACACCAC 1210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     968 AAAATCTGATTTCCTATTTAACAACTGCACAGTGAAACAAAAGAAGTALACTGAAAA 1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1391 GACTGAAGGATATAGGATACATCTTTAAAGAGAATTTGCTAAAGCTGTGGGACAGGGTT 1450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1088 GTGTGGAAATTGAATGACACAAAGAAAATTGAAAGTTCAGTTGTAFIACGAGAAIAAIGG 1147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1148 AATCCATGCTTAAATCAGAAGAAGGATTA1GGAFTGAAAATTTTAGGAAGTLGTGA 1287
                                                                                                                                                                                                                               668 CHTHTATGAATTCTTGGACTTCTAACATCTAALGGACTTCCAGAGGTTGAAAATCTTL 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       788 AICATGATAAAACICTTCAGACIGATICTATAGACAGITITIGAAACACAGAGAACACCAC 847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  848 GAAAAAGTAAGCTTGATGAAGAGGTGAATGTAATTGCTGCACACAGTGCAGAGTTAAGGACTG 907
432 GIGGGGGAAATCIGIATCIIITAIIGCACGAGIIGACCIAGAIGAGAAIGICGIICAC IIIAC 496
                                                               129 TGAGCTACAGAAAAACATA-GAAATCAGTGTCCATAAATTCTTTAACTTACTAAAAGAAA 187
                                                                                                                                                                                                                                                                                                                                                                                     611 FULLIGIACITICAGAAATEGAAAGGACATGAGAACTTATATATTTGACAACCA 670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          428 TAATGCTATGTGTGCTTGACTATTTATTAAACTGTGAGGTGTGTTGCTGAAAGAAG 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              851 CATATAAACACACTICTTATACCCATTAATGGTTTCACCTTCGAACACCCGGGGGGAGGTCAGA 910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             548 A7A35A3180A036A1A3CAAAACAACIAGAAAAIGAIACAAGAAIIAIIGAAGIICICI 607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      911 ACAGGACTICCACGGATAGCAAACAACIAGAAAATGATACAAGAATTATTGAAGTICTCT 970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     608 GWAAAGAAGAYGAAFGTAATATAGAYGAGGTGAAAAAFGITTATYTGAAAAATLETATAG 967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          728 CIANACGAIACGAAGAAAIITAICIIAAAAATAAAGAICTAGAIGCAAGAITAIITIIGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             908 ITAIGAACACIAFCCAACAATTAATGATTTTAAATTCAGCAAGTGATCAACCTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           188 ITGATACCAGTACCAAAAGTIGATAATGCTATGTCAAGACTGTIGAAGAAGTATGATGTAT
                                                                                                                                                                                                                                                                                                                     808 GCAGTTCGATATCTACTGAAATAAATICTGCATTGGTGCTAAAAGTTTCTTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PGR TITIATIANGTAAAAGGGAAAGTAJIAGAAAIGGAAGAIGAAIGIAAIGTAAITIGAGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  488 CATATAAAACAGCTGTTATAGCCATTAATGGTTCACCTCGAACACCCAGGCGAGGTCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1028 GAGTGAAGGATATAGGATAGATGTTTAAAAGAGAAATTTGGTAAAGGTGTGGGAGAAGGTT
```

>	1208	AFGAVACATITICATATGETITATEGACGEGEGETGTAGACGTGTAATGGCCACAT	1267
÷	17,71	ATGAPAACATTI FOATATGTOTTTALFGGGGTGPOLICEFGGAGGTTGTAATGGCGACAT	1630
S 3	1268	ATAG'ANAAGTACATGTCAGATCTGATTGTGGAACAGATTGTGTTTGCGATGGATTGTTTGT	1327
1	H73	TAA EDIGELAAL HAAAAAA TILAA HAAAAA BAAAAAAAAAAAAAAAAAAAAAAAAAAAA	1387
. 4	1691	HELER HELLER	
<u></u> ₹ - ₽	1.488	ИВ СИGANGGRACTTGANAGGGAAATGATAAAACATTTAGAACGATGTGACGATGGAATCA 144 	1447 1810
Š	1448	Tebaarecottoralescottoralaticactifatificalcularicaarda	1507
â	1811	TOGAATOOSTIGGATGGGTGGGAAAATTAATTTAATTTAAAAAAGAATGAAAGG	1870
<u> </u>	15.08	APPORATA A TOTAL CONTRACTOR A TOTAL OF TOTAL A	1567 1930
<u> </u>	1568 1341	68 ATAATCA'ACTGCAGCAGATATGTATCTTTCTCCTGTAAGATCTCCGAAGAAAAAGGTT 163 	1627
<u>`</u>	1528	CANTROGGEDIAAA ICTATOGAAA BOAAAA ACAAAA CAAAA CAAAAA CAAAAAAAAAA	1687
. ५ 4	1688	TWO TRANSPORTED AND LITTER TO STAND TO AND A CHARGE AND CHARGE TECCHORY OF CASHAGE TO TRANSPORTED FOR THE CONTROLLED AND A CHARGE AND A	1747
<u> </u>	1748	CCTATCTCCGGCTAAATACACTTTGTGAACGCCTTCTGTCTG	1807
≿ ब	1808 2171	ATATCATCTGGACCCTTTTCCAGCACACAGAGAGAGAGAG	1867
रू य	1868	GOTALLEGIACTAAATTALGALGIGTICCAEGIALGGGAATALGGAAAGTGAAGAATALA TITLELLITTETAACTAATTALGATGIALTEGATGIALGGGATATGGAAGAAGAATAAG	1927
<u> </u>	1928 2291	28 AVTTANATTGANATGATGTANAGGATAGAAGGATCTTGCTGATGCTGTTGAGGAGA 196 	1987 2350
\$ ÷	1988 2451	CALTCAAN GEGITTEGA COANGAGAGA GAGA TAGATGATGATATAGATAFCIATAAACT CALTCAATA GAGATA GAGATGATATAGA GAGAA TAGATA GAAA GAAA GAAA GAAA GAAA GAAA GAAA GAAA GAAA GAAA GAAA GAAA GAAA GAAA GAAA GAAA GAAAA GAAAA GAAAA GAAAA GAAAA GAAAA GAAAA GAAAA GAAAA GAAAA GAAAAA GAAAAA GAAAAA GAAAAA GAAAAA GAAAAA GAAAAA GAAAAA GAAAAAA	
15 4	Z048 2411	CORPORTA GONDAGACTIGAAAAAAATTI LOCAGTARIGCI I GCACCAGGCCCCTA LITTER LITTER TOTAL CORTITER ON THE FILTER INTO THE CORTICAT COACCAGGCCCCTA	- 4
\$ £	2108	CCTTGTCACCAATACTCACAT FOOTGGAAGCCTTACAAGTTTCCTAGTTCACCCTTAC LTTLLTTLLTTLTTTLTTTLTTTTLTTT	2167 2530
दे ब	2158		2227
독표	2228	GTCT GCCAACAACAAAAA GACTCCAAGA LCAAGAAGCTTGTAGTATTATTATTATTATTATTATTATTATTATTATT	N 6

2707 1001 11 H 7 2348 TOCTCAAAAGAAGTGCTGAAGGAAGCAACCTTCTAAAGCACTACTGAAAAACTTGCCTTTTC 2407 2711 TGTFGAAAASAAGTGTGAAAGSAAGGAGCTGCTAAAGACTGAAAAAAGTGGTTG 2770 2468 AGCAGAAACTGGCAGAAATGACTTCTACTCGAACACGAATGAAAACCAGAAAAATG 2527 14 10 3068 GCAAAAA1GGATATTATTAGAAATTAGAAAAATTAGTAATTTTAGAATTTAGAATTAGAAATTAGAATTTTA 3127 3248 FACCTCAGAATGTAAAAGAACTTACTGATTATTTTTTCATCCAACTTATCTTTTTTTAAAT 3307 2528 ATAGCATGGATACCTCAAAGAAGGAAGAAATGAGGATCTCAGGACCTTGGTGGACACTT 2587 14.10 2408 ATATTGAAGGATGAGATGAAGGAGATGGAAGTAAACATCLCCAAGGAAATTC 2891 ATAGCATGCATACCTCAAACAAGGAAGAAAATGAGAATCTCAAGAACTIGGIGGACACT 2648 GTTTATGGGCACATTTAATATGTTCAGCTCTTTTTGTGGATATAAAATGTGCAGATGCAA 2708 TTGLTTGGGTGATTGCTAAGCTACTTGAAALGTTAGLGALLGTTALATATAAAGALLGA AAAATTGCTGTGCTTTATGGATAGTAAGAATGGCCCCTAAGAGTGCGTCCTGATAACCCA 2948 ATTAATTTATATGTALATTTTTTAATTTAACAIGAACAGCCITAGAAAALGICCIAL 3431 GCAAAAATGGATATTATTAGAAATTAGAAAAAAAATTACTAATTTTACACATTAGATTTA THTTACTATTGGAATCTGALATACTGTGTCTTTTTTTTTAAAATTTTGCTTTTAATTAA 3188 ATANANGCIGGANGCAANGTATAACCAIATGAIAGTATGATACTAGAAAGAATTTCA 8008 CTATCTTCCAAATGCAATTTGATTGACTGCCCATTGACAAAATTATGCTGAACTCTTCT 2588 CTGTACACCTCIGGATICATIGICICICACAGAIGIGACIGIAIAACIIICCCAGGTTCT 2888 GCCCFGTGTGACTTTGCCTTCTTTGLACCAIAIAGGIGAIGIIIGCTCTTGTTTT 3491 TITLACTALLGGAALCTGALAFACLGLGTGTTTTALAAAALLLLGGTTLTAALLAA 3308 GAGGATTAITGALAGI 3323 2828 qq â 90 q J. ò 2 <u>2</u> qq <u>a</u> Š ò q ò Š ੜੇ ò င် Š 5 <u>a</u> ò ŝ â $\stackrel{>}{\circ}$ a ò 3 ŝ

```
QO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                     £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
  PAI 18-FEB-1993
                                                                                                                                                             Eukaryota; Metazoa; Chordata; Cramiata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                      1 (bases 1 to 4580)
Final Y R.T. Than A Murphree I.A and BenedictWF
A method for detecting the predisposition to retinoblastoma and
method for detecting a retinoblastoma gene in tumors using a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       280 GIGGGGAAICIGIAICIIIAIIGCAGCAGTIGAAATAGAGAISCGIICACIIIAC 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            189 IGATACCAGIACCAAGITGATAAIGCIATGTCAAGACIGITGAAGAGIAIGAIGIATI 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          400 TGATACCAGTACCAAAGTTGATAATGCTATGTGAAGACTTGAAGAAGTATGTT 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24% GITTONACICTICAGCAAATTGGAAAGGACATGTGAACTTATATATTTGACAACCCAG 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       450 GITTGUACICIICAGCAAAIIGGAAAGGAAAGTGAACIITAIAIAITIGACACAAACCCAG 519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   309 CAGITCGATAPCTACTGAAATAAATTCTGCATTGGTGTTAAAAGTTTGTTGGATCACATT 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (69 ITTATTAUCTAAAGGGGAAGTATACAAATGGAAGATGATGATGATTTCATTTCAGTT 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      124 AALDC1ALGIGFGGTIGACTATTITATTAAACTGTCACCTGCCATGTTGCTCAAAGAACC 488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   640 AATGCIATGTCCTTGACTATTTATTAAACTCTCACCCATGTTGCTCACCCAGGC 699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 489 AIATAAAAGGGGGTGTTATAGGGGTTGAGGTTGAGGTGGAAGAGGGGAGGTGAAA 548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            54.9 CAGGAGTGCAGGGATAGCAAAACAACTAGAAAATGATACAAGAATTATTGAAGTTCFCFG 608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        75 RAGGAGTGGAGGATAGCAAAACAACTAGAAAATGATACAAGAATTATTGAAATTGTGTG 819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       609 FAARGAADA GAA BUTAANA LAGATGAGGTGAAAAADGTTTATTGAAAATTTTATAGG - 668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               129 IGAGGTACAGAAAAACATAGAAATGAGTGTCCATAAATTGTTTAAGTTAGTAAAAAAT 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Per GIATAAAAPAGGIGITATAGGGATTAATGGTTCAGGTCGAAAACCCCAGNCGGGTCAGAA 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9 GGAGAAAGITICAICIGIGGAIGGAGIATIGGGAGGITATATICAAAAGAAAAAGGAACI 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97.9%; Score 3254.8; DB 6; Length 4580;
99.2%; Prod. No. 0;
            H.sapiens DNA for 4.6 Kb retinoblastoma gene probe.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches 23, Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 others
  linear
  N/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   811 q 1451 t
                                                                                                                                                                                                                                                                                                                          Patent: EP 0293266 A 1 30-NOV-1988;
RESEARCH DEVELOPMENT FOUNDATION
                                                                                                                                                                                                                                                                                                                                                                                                                    /organism "Homo sapiens"
/db_xref="taxon:9606"
  4580 bp
                                                                                                                                                                                                                                                                                                                                                                             Socation/Unalifiers
                                                                                                                                                                                                                                                                                                      retinoblastoma gene probe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   840 C
                                                               A01444.1 GI:345125
                                                                                                                                                                                                                                                                                                                                                                                            .4580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 99.2
Matches 3290; Conservative
                                                                                                                   Homo sapiens.
                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1477 a
AU1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                      FCAN.SM
                      Non-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A DOMESTICA
                                                                                        KEYWOFDS
                                                                                                                                                                                                           KEFERENCE
                                                                                                                                                                                                                                                                                                                                                                        PEATTRES
                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
```

```
1508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1899 CCACAGAGCCATTGAAATCTACCTCTTTCACTGTTTTATAAAAAAGTGTATCGCTAGC 1958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1029 AGTGAAGGATATAGGATACATACTITAAAGASAAAITTGGTAAAGCTGTGGGAAGAGGGTTG 1088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1149 AUGCAUGCUVAAATGAGAAGAAGAATGATTGCATTGAAAATTTTAGCAAAGTUGGAA 1208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1269 TAGCAGAAGTACATCTCAGAATCTTGALTCTGGAACAGATITGTCTTTCCCALGGALLCL 1328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1329 GAATGTGCTTTAAAAAGCCTTTGATTTTACAAAGTGATCGAAAGTTTTA CAAAGC 1388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1509 CCGAGAAGGACCAACTGATCACCTTGATCTGCTTGTCCTCTTAATGTGTGCTGGGAGAA 1568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1569 TAATCACACTGCAGCAGATATGTALGTTTCICGIGIAAGATGTGCCAAAGAAAAAGGTTG 1628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1629 AACTACGCGGGGGGGAATTCTACTGCAAATGCAGAGACACAAGCTCAGGCGTGCAGAC T688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1749 CTATCTCCGGCTAAATACACTTTGTGAACGCCTTCTGTGAGGCACCCAGAATTAGAACA 1808
                                                                                                                                                                                                                                       1000 TCATGATAAAACTCTTCAGACTGATTCTATAGACAGIIITGAAACACAGAGAGAACACCACG 1059
669 TITITATGAATTCICTTGGACTIGTAACAICTAATGGACIICCAGAGGTIGAAAAICIIIIC 728
                                           1689 CCAGAAGCCATTGAAATCTACCTCTCTTTCACTGTTTTATAAAAAGTGTATPGGGAAGC
                                                                                                                                                                                         789 TCATGATAAAACTCTTCAGACTGATTCTATAGACAGTTTTGAAACACAGAGAACACAGG
                                                                                                                                                                                                                                                                                        849 AAAAAGIAAATIIGAIGAAGAAGIGAAIGIAAIIOTIGGAGAGAGAGITAGGAGIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                    1120 TATGAACACTATCAACAATTAATGATTITAAATTGAGGAAGTGATGAACTTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    969 AAATCTGALLTCCTATTTTAACAACTGCACAGTGAALCCAAAAGAAAGTALATTGAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1479 TAGCAGAAGTACATCTCAGAAATCTTGAGTCAGGAACAGATTIGTCTTTGCCATGGATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1389 AGAAGGCAACTIGACAAGAAAAIGAIAAAAACAIIIAGAACGAIGIGAACAICGAAICAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1449 GGAATOÇOTTGCAŢGGGTGCTGCAGATTGAÇOTTTATTTGATOTTAAGGAALGAAAGGA
                                                                                           729 TAAAGGATAGGAAGAAATTTATGTTAAAAATAAAGA CIAGATGCAAGAHAITHIIGGA
```

	ATASTATICIATACTC 2048 ALACICITCIATACTC 2258 PPOACAGGCCCCTAC 2108 HITHITHITHIT PSTACTAGGCCCTAC 2108 HITHITHITHITHITHITHITHITHITHITHITHITHITH	IATAAAATTCAGAAGG 2228 	255 240 261 261 246 267	AACTAGAAAAGAAAGA 2528 HILLIHIHIHIH HILLIHIHIHIHI AACTTGGACACTG 2588 HILLIHIHIHIHI AACTHCCAGGTTGG 2648	ANTITICIONE CAGGE CAGA ANTITICIONE CAGA 2708 ANTITICIONE CAGA 2708 ANTITICIONE CAGA 2768 ATTITICIONE CAGA 2768 ATTITICIONE CAGA 2768 ATTITICIONE CAGA 277	
THE HELLER HELT HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER HELLER	ALL MAAN STGITTIGAT NAAGAAGASTATJATTICIATTATATTATATATATGATAAGTG ALL MAAN STGITTIGAT NAAGAAGAGGAGTATGATTGATTATATATGTATAAGTG ALL MAAN STGITTIGAT NAAGAAGAGGAGTATGATTGATTATATGTGTTATAAGTG OTHER HELLITHE STATEMAAN AAALATHI HELLITHI NOOTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	GATFOTESAGSSAACA FOTALTICANS SEGANIMITED HITTERGAAGG THEITHELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE THE THE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE TO THE THE THE HITTELLE HITTEL	ATTOMOMOMITOTOMOMANITOMOMANITAMITOMOMOMOMOMOMOMOMOMOMOMOMOMOMANITOMOMOMOMOMOMOMOMOMOMOMOMOMOMOMOMOMOMOM	OPAGAAATOOPAGAAAGAPTITIAGIPGAAPAGAATOGAAAGGAAAAGAATGAATGA PELLIATI ELETETETETETETETETETETETETETETETETETETE	PIT CONTROLLE IN THE FINANCIA OF THE FINANCIA	AATCTEGTGTAAATCYTGYYA HTAAAAAGTGTAGCAGATTGTTTCTGTTGTGCCGAAAGTA FILLETTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
2019 12 2019 1	2159 AU 2159 AU 2259 G 2259 G 2109 C 2110 C	2169 637 2 478 634 2 2 2 9 10 2 4 3 8 Th		2529 TZ 2529 TZ 2738 TZ 2738 TZ	2738 Tr 2649 Tr 2858 Tr 2709 Tr 2918 Tr	2769 AV - 2978 AV 2829 AV
	5 4 5 4 5 4	3 4 5 8 5	ब ५२ ५२	\$ 9 \$ 9 \$	8 7 8 9 9	학급 학

```
1 (bases 1 to 4232)

Xu.H.-J., Bu.S.-X. and Henedict,W.F.

Knod-spectrum tumor suppressor acres tene products and methods for
tumor suppressor acres therapy

Patent, US 5912236-A I IS-IUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear PAR 18 FEB 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                8009 TATCTTCCAAATGCAAATITGATTGACTGCCATTCACCAAAATIAFGCTGAAATTGCTG 4068
                                                                                                                                                                                                8069 CAAAAATGGATATTATTAGAAATTAGAAAAATAACTAATTTAAGAATTTATTATAATTTTAT +128
                                                                                                                                                                                                                                                                                  8278 CANANATGGATATTATTAGAAATTAGAAAAATTACTAATTTTACACATTAGATTTTAT 3337
                                                                                                                                                                                                                                                                                                                                         3398 TAAAAGCIGGAAAGCAAAACCAIATGAIACIAICAACTACTGAAACAATIICAL 3457
                                   2889 GCCIGICIGACITIGACITICIDIGIA GARAGARA GALLIGARA LATITIA 2948
                                                                                                                                                                                                                                                                                                                        3129 TTTACFATFGGAATCTGATATACTGTGCTTGTTTAAAATTFTGCFFTTAAA 3188
                                                                                                                                                                                                                                                                                                                                                                                             3189 TAAAAGCTGGAAGCAAAGTATAACCATATGATACTACTACTACTGAAACAGALTTCAT 3248
3038 AAATTGCTGTGCTTTATGGATAGTAAAAATGGGCCTTAAAAGTGCTGATAACCCAG 3097
                                                                       8098 GCCIGICIGACTACTIIGCCIICIIIIGIAGCAIAIAGGIGAIGIIITGCICIIGIIITTA 4157
                                                                                                        226 TCARGACTGTTGAAGAAGTATGATGATGATTGATGATCATETAGA AAA, LGGAAAGGA 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100 GACCTAGATGAGATGTGGTTGACLFTTAMTGAGCTACAGAAAAATAGAAALAATAGTCTT59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  160 CATAAATTCTTTAACTTAAAAGAAATTGATACTACCAGTACCAAAGTTGATAATGTTTG 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           edro to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match 57.0%; Score 4222.4; DR 6; Length 4242; Local Similarity 106.0%; Prod. No. 6; es 3224; Conservative 6; Mismatches 1; Indels 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   I:NA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1 from patient US 5912236.
AR072031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism-"unknown"
597 c 566 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AR072041.1 GI:7222919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3309 AGGATTATTGATAGE 3323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3518 AGGATIAITGATAGT 3532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 3223; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₹ ₹ ₹ ·
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1086 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Boutee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORMAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 8
AR072031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34
11
11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NICINO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best
                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                               <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q_0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                      d
                                                                                                                                                                             ò
                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
```

οy

1599 1720 CIGITITATAAAAAAGTGTATGGGCTAGCCTATCTCCGGGCTAAATAGACTTTSTGAAGGC 1779 1627 CECTITETATAAAAAGEGEACCCTAGCTAGCCTATCTCCCGCTAAATACACTTIGEGAACCC 1686 1840 CAGAATGAGTATGAAATTGAGAGAGAGTATTTGGAGCAAATTATGAGTGTTCCATG 1899 2106 2167 "CAAGAA"C""PAGTATGAA"TGGTGAATGGGGACTTGTGGAGAAGTTGGAGAAAATA 2226 2440 AAACATCTCCCAGGAGAGTCCAAATTTCAGGAAACTGGGAAAHGACTLCTACTCGA 2499 1480 TTATTTGATCTTATTAAACAATCAAAGGACCGAGAAAGGACGAACTGATGGGTGGALGT 1539 1447 GOMMONOMMANTOMMONTOCHOLOGICA GOOGAGCAGCAGCACAIAI CHAICH I I SOB 1660 COTGIAAGATOTOCAAAAAAAAAGGIICAACIACGGGGGGTGIAAAIICIACTGCAAATGCA 1659 1660 GAGACAAGCAAGCTCAGCCTTCCAGAAGCCATTGAAATGTACCTCTCTTTCA 1719 1780 CIICTGICIGAGIACCCASAAIIASAACAIAICAICTGGACCCTIIICCAGCACACCCG 1839 1687 FITTHTHRAGAGAGGAAATAGAAATAGAGGAGGGGAGGGTITTGGAGGAGACGG 1746 1960 AAGGATCTICCTGAIGCTGTIGAGGAGACALGAAACGIGITTIGATCAAAAGAAAAGAGAAGAAGAAA 2020 TATGATTCTATTAGTATTCTATAACTCCGTCTTTGATCCAGAGACTCAAAACAAATATT 2079 1927 TATGATTCTATTATAGIATTCTATAACTCGGGTGAGGGGGTGAAAAGAATATT 1986 2080 INSPASIALS TESTAS PASSES CONTINEINA CONTRACTOR AND TESTAS 2139 2200 CHGAAGACHCCATATAAAAHTTZAGAAGCHCTGCCAACAACAACAAAAATGACTCCAAGA 2259 2260 TOANGAAICITAGIAICAATIGGIGAATCAIICGGGACTTCIGAGAAGITCCAGAAAAIA 2319 2287 CCIAAACCACIGAAAAAACIACGCIIIGAIAIIGAAGGAICAGAIGAAGCAGAIGGAAGI 2346 1267 TAGAAAGTGATGSAAAGTTTTATGAAAGGASAAGGCAACTTGACAAGAGAAATGATAAAA 1326 1747 CAGAATGAGTATGAAGTCATGAGAGACAGGATTTGGACAAATTATGATGTGTICCATG 1806 1900 TATGGCATATGCAAAGTGAAGAAIATAGACCTTAAAJTCAAAATCATTGTAACAGCATAC 1959 2140 CCTTACAAGITICCTAGITICACCTIACGANICCIGGAGGAAGAICIAIAINIAGACOG 2199 2047 CTIAPANSTIOTANSTON OFTAN SANIOUS SANACHERISTANIA SONO 2227 AATGAGATGGTATGTAACAAGGAGGGIGLGGTGAAAAAGAAGIGGTGAAGGAAGCAT 1540 GCTIGTCCTCTTAATCTTCCTCCCAGAATAATCACACTGCAGCAGATATGTATTTTCT 2107 CIGAAGAGTCCATATAAAATTICAGAAGGTCTGCCAACAACAAAAAATGACTCCAAGA 2380 CCTAAACCACTGAAAAAACTTAGGCTTTGATATTGAAGGALCAGATGAAGAGALGGAAGT да : ó ã ò Q C ŝ 33 Qγ 6 ò g ó δ QQ ò qq Ś qq ã qq õ 3 QQ ó q ó

5 3	2500	APARTOA LOFAAAAPPAGAAAA LOAA LOA MISPA DISOA DOA LOFEAAPAABAAGAGAAA HITTIIIIIIIIIIIIIIIIIIIA APARTOA GAALOAAAAAAA AAAAAA GAA GAA LOA LOHIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	2559-2466
5 E	2560	TO A MATCH CAMPORT TO STORAGATED TO THE TOTAL TO A MATCH CAMPACE AND ACCOUNTS TO STORAGE TO STORAGE TO STORAGE TO STORAGE TO STORAGE TO STORAGE ACCOUNT.	2526
5 2	75.20	APRICACTOTATAACTTFOOTAGTTOTGTTTATGGGGGACATTTAATAFCTTCAGGTCTT 	2679
5 43 43	25.80	HEDERSCALALAMAAN SECRETARIO DEL DEL GOGLGATECTAM SCRACTIGAAATG HEDER LEDER 27.59.2646	
55 EB	2740	TTAGECATE AL LA LA LA LAGAGA EL GAAAA LO ETGECAA GEORGOOGO (LELLELLE LELLE	2799
ŝ ŝ	2800	800 TGTAGCAGATIGITTOCTOCAAAGTAAAATGCIGIGCTITATGGAAGGAAGG 285 	2859 2766
§ 2	2860	OPPETAVAGEOGRAFICE HALAACCCAGGEETETETETETETETETETETETETETETETETETET	2919 2826
8 €	2827	CAFALAGS IGATOLITION OF IGHT TAINAALH HATGITALAFITH TITAATTTAAC FILLIH HITTILLIH HITTILH HITTILH HITTILH HITTILH HITTILH HITTILH CAFALAGS IGATOLITION OF THE THATTAAC	2979
5 =	2,480	ATGANCACCTIAGANATGTGTGGTATGTATGTTGCANATGCANTIGATIGATGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	3039 2946
5 £	1040	ALTCACCAAALTALCCLGAACLCTTCLGGAAAAATGGATATTATTAGAAAATAAAAAAAAAA	30008
62.	41 00 4007	AATTACTAATTITACACATTACATTITATTITACTATTGGAATCTGATATACTGTGTGCT TITTITTITTITTITTITTITTITTITTITTITTITTI	3159
5 =	4160	TGITTIATAAAATTITTGCTITTAAATAAAAAGCTGGAAGCAAAGTATAACCATATGA 	3219 3126
5 3	\$220 \$127	TACTATEATACTACTSAAACATTICATACCICAGAATGTAAAGAACTACTGATTAT TACTATEATTATATATATATATATACCICAGAATGTAAAAGAACTAACTGATAT TACTATCATACTATGAAACAGATTTCATACCICAGAATGTAAAAGAACTTACTGATAT	3279 3186
5 3	1187		
7. 1.	7. T.		

```
1 (bases 1 to (242)
Xu, H. J., Hu, S. X. and Benedict, W.F.
Xu, H. J., Hu, S. X. and Benedict, W.F.
Fund Spectrum taket suppresser qenes qenes products and methods for
tunor suppresser qene therapy
bateut: US $912.24, A. 2.15 JUN 1999;
                     Timear PAT 18 FEB-2000
                       Š
N
O
                              Separate 2 from patent US 5912236.
APOZZO32
                       dq 7171
                                                                      AR072032.1 011:7222920
                                                                                                                                                   Unclassified.
                     ARU/2012
                                                                                                               Unknown.
                                                                                                                                Utike At.
                                  No. 1 INTERIOR
                                                                                                                              PRIANTSM
ARU/2012/0
                                                     ACCESSION
VERSION
                                                                                                                                                                   PEFERENCE
                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                           D. HURNAL.
                                                                                          KEYWORDS
                                                                                                                                                                                                         TITLE
                                                                                                           고, 의미·소
                 50.40
```

```
2450 AFECCICCACACACACASTAGGACTGIAGAGACACIATOTATATAATAATGATT 2491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.490 ITAAATICAGGAAGIGAICAAGCTIGAGAAAATGIGAITTCGIATITTAAGAAATIGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1000 GTGAATFFTAAAGAAAGTATATTGAAAAGAGTGAAGGATATAGATACATTTAAAGAG 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2570 AAAGATCTAGATGCAAGATTATTTTTGGATGATGATAAAACTCTTCAGACTGAT CSTA 2511
                                                                                                                                                                                      .050 TGTGAACITATATATTGACAAGGGAGGAGTTGATATGTAMIGAAATAAAT FTGGA 2991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           940 TTAAATTCAGCAAGTGALCAACCTTCAGAAAALGTGATTTCCTALTTAACAACTGCACA 999
                                                                                                                                                                                                                                      160 CATAAATICITITAACITACIAAAAGAAAIIGAIACACACAAAGIIGAIAAGCITATG 219
                                                                                                                                                                                                                                                                                                                                                                        280 IGIGAACTIAIAITIGACACAGCAGCAGIICGAIATCIACTGAAATAAATICTGCA +39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              460 CICICACCTCCCATGITGCICAAAGAACCAIATAAAACAGGTGITAIACCCATGIAAAGGT 519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                520 TCACCTCGAACACCAGGCGAGGTCAGAACAGGAGTGFACGGATAGFAAACAACTAATAGAA 579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                580 AATGATAFAAGAATTATTGAAGTTFFFGTAAAGAAFATGAATGTAATATATGAAGTG 639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    640 AAAAATGITIAFITICAAAAATITITATACCITITATGAATTCTTGGA/TTGTAACATCT 699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      700 AATGGACTTCCAGAGGTTGAAAATCTTTCTAAACGATACGAAGAATTTATCTTAAAAAT 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      760 AAAGAPCTAGATGCAAGATTATTFTGCATATGATAAAACTCTTCAGATGATGATAT 819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        820 GACAGTITIGAAACACAGAGAACACACGAAAAAAGTAACCTIGA1GAAGG1GAATGTA 879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            880 ATTCCTCCACACACICCAGTTAGGACTGTTATGAACACTATCCAACAATTAATGATGATT 939
                                                                                                                                                                    100 GACCTAGATGAGATGTCGTTCACTTTTACTGAGCTACAAAAACATAGAAAAHTAGTGTC 159
                                                                                                                                                                                                                                                                                                        340 TTGGTGCTAAAAGTTTCTTGGATCACATTTTTATTAGCTAAAAGGGGAAGAATATTACAAATG 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              400 GAAGATGATCTGGTGATTTCATTTCAGTTAATGCTATGTGCTGTGGTGATTATTAAA 459
                                                                                                                                     C. 2418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 6.5 Lammath 32323
                                                                                                                                    1; Indel:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 4222.4;
Pred, No. 0;
                                                                                                                  100.0%; Pred. No. 0;
lyo o; Mismatches
                          Zorganism-"unknowu"
566 c 597 u
   Location/Qualitiers
                                                                                                                                    Matches 3223; Conservative
                 1232
                                                                                                                   Best Local Similarity
                                                   984 a
                                                                                                   Query Match
                   Source
                                                 BASE COUNT
FEATURES
                                                                  RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       يَدِ
                                                                                                                                                                       ò
                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ^{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \overset{\circ}{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \stackrel{>}{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ω
                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

10.0 GAMITICE TAMOSTERIOS ACCORDED SERVINGES ACTIVITIES IN INTERIOR TO A CONTROLL AND STATEMENT ACCORDED SERVINGES AND STATEMENT ACC	ACAAACTT 1119 A'AAA''TT 2211 AACGATTA 1179 	ATTGGGG 1239	TRATIOT 2031	GATTIT 1971 TGATAAA 1419		9644767 1539 	VENTETCT 1599 	2AAATGCA 1659 	2FCFFFCA 1719 1111111 2FCFFFCA 1611	STGAAGG 1779 	ACAPOPPG 1839 	STTCCATG 1899 	2AGCATAC 1959 	AAGAGGAG 2019 	2444141 2079 	Trespant 2139
	ATTGGATCACAGCGATA ATTGATCACAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGA	ATTITION OF THE STATE OF THE ST	AGTACATIST ASAATIV	ALLIANTTIANANGEET FILLITITITITITI SCEFANTETAAAAGCCE RACTTGACAAGGAAA	THITHITHITHITHITH CTTGCATGCTCTCGG THITHITHITHITHITHITHITHITHITHITHITHITHIT	GGACTAACTGATTAATC 	ACTORAGACACATATO TELEFIELE	CGTGTAAATTCTACTG 	GCATTGAAATGTACCT 	######################################	9966ACCCPPPFCAGC 1111111111111 196ACCCPFFFCCAGC	SGACCAAATTATGATGT 	ATTCAAAATCATTGTAA 	AGTGTTTTGATCAAAG 	ATGCAGAGACTGAAAA 	WYAATAYYTOAYATTO TITITITITITI WGAATACCTOACATYG
	SACAGGGTTGTGTGGAA THILLILLILLILLILLILLI RATAGGATTGTGTGTGTG RATAGGAATGGATGGATGGATGGATGGATGGATGGATGGA	ACTICIGAAIGACAACAACAACAACAACAACAACAACAACAACAACAACA	GGGCCACATATAGCAGAGAGGCAGAGGCCAAAGGCCAAAGGCCAAAGGCCAAAGGCCAAAGGCCAAAGGCCCAAAGGCCCAAAGGCCCAAAGGCCCAAAGGCCCAAAGGCCCAAAGGCCCCAAAGGCCCAAAGGCCCCAAAGGCCCCAAAGGCCCCAAAGGCCCCAAAGGCCCCAAAGGCCCCAAAGGCCCCAAAGGCCCCAAAGGCCCCCAAAGGCCCCCC	A 1	Traticaaagcagaaggg Traticaaagcagaaggg Wicgaatcatiggaaggg TILIIIIIIIIIIIIIII	ATTTAAARGACCGAGAAA 	STOTGCAMAATAATGAG TITITITITITITITITI	AAAAAGGITGAAGTAGG TIIIIIIIIIIIIIIIII WAAAGGTTGAAGTAG	SCHLOCAGACCCAGAGAC 	VTC4807EAG02TAF2FC 	AAFFAGAAGAFAFGAFG 	IGAGAGAGGGATTIG 	NGAATATAGACUTTAAA 	TTCAGGAGACATTGAAA TTTTTTTTTTTT	PCTATAACTOGGTCTTT 	SCOOLOTACOTTICE
	AFILICTAAAGTIGIGGG	CATTCAAAATTTTAGCAA CATTCAAAATTTTAGCAA	CONTRACTOR AND SACRET OF THE S	##C#Q#1110111111111111111111111111111111	CAAAGTGATCGAAAGTTT	ATTTGALCTTATTAAACA 	TTGTCCTTAATCTTC	PEGTAAGATETEGAAAGAA TITTITITITITITI TGTAAGATET-PAAAAGAA	NGACACAACCICAG 	031111AFAAAAAAGTG17 1111111111111111 03TTTAFAAAAAGFGT	TICTE TETERAGRAPHERA 	kgaa egaqtargaaqtiqa. - - - - - - - - -	atgggatatggaaastga 	AGGA FOLFOCTCATGOTG" 	ATGALFYTAFFATAGTAFF 	IGCACTATGCTTCCACCAC
								1500 00 11 1730 00								2080 II

2439 3159 3160 TGTTTTATAAAATTTTGCTTTTAATTAAAAAAAGGTGGAAAGGAAAGTATAAACGTG 2559 2260 ICAAGAAFCFTAGTATTGAAITGGFGATGATTGGGAGTTGTGAGAAGTTGCAGAAATA 3319 2560 PGAGGATOTOTOAGGAOGTGGADACTGTGTGTAOACHOTOTGGATTOATTGTGTOTOACAG 2740 htastcartstratatavassattsaaatettststaatottscartotascalltaaaaksi 2799 2800 IGTAGCAGATTGTTGTTTTTTAGAAGTAAAATGGTGGGGTGTGTTAFGGATAGTAAGAATG 2859 5803 3040 ATTCACCAAAATTATCCTGAACTCTTCTGCAAAAATGGATATTATTAGAAATTAGAAAA 3099 214.0 - POTITAPANGI PEPENGITI PAPARI HARARA PERABANARA PATAK PATAK PAPARAK - 21.69 831 351 170 TGTTTTATAAAATTTTGCTTTTAATTAAATAAAGCTGGAAGCAAAGTATAAACATATGA 111 650 TTTGTGGATATAAAATGTGGATGCAATTGTTTGGGTGATTGCTAAGGCAGTTGAAATG 591 890 AAAFATOTOTAASASASASOTAAAATTOAGASAAATGATGAGAAAATGAOTAGGA 2500 ACACGAATGCAAAAGCAGAAAATGAATGATAGCATGGATACCTCAAACAAGGAAGAGAAA 2680 TTTGTGGAVAYAAAAATGTGGAGATGGAATTGTTTGGGTGATTGGTAAGGGAGFFGFTGGTAAG 2860 - 30001 AGAS PSSASTOC BALANCO ASSOCIATO BACH HIGGOTTOTTTTOTAGE THE HITTELL HITTEL 230 AAITACEAATTTTEACACATTAGATTTTATTTTACTATTGGAATCTGGATATACTGGGCT 2.200 PERMAGAGIP PATAAAATT PERMAGATTI GOGAASAGAAGAAAAATGAGAASA 1130 CTGAAGAGFCCAFATAAAAFFTCAGAAGGFCFGCCAACAACACAAAATGACFCCAAGA 2440 AAACATCTCCCAGAGAGTCCAAAITTCAGGAAALTGGGGAAATGGGAAATGACTTCTACTCGA 2980 AFGAACASO TETAGAAAA ESEGEOTA FOTA FOTA AATGOAA TETAGA TEGAOTEGOTO 290 ATTCACCAAAATTATCCTGAACTCTTCTGCAAAAATGGATATTATTAGAAATTAGAAAAA 3100 AATTACTAATTTTACACTTTASATTTTTATTTTACTATTGGAATCTGATACTGTGTGTGTGCT 2380 CCTAAACCACTGAAAAACTACGCTITGAIAITGAAGGICAGATGAAGCAGAIGAAGI qu ; qq Cp g οy 심 Š 2 Ş 윤 qq g Ś δò ć Cp Ś Ω Q D ŝ ద $\Omega \mathbf{y}$ 5 ŝ 5 ò õ

```
ф
Т
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       λο
:
              q
                                                                                                        Š
                                                                                                                                   2
                                                                                                                                                                                             a
                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                   <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                        ਤੋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                             5
                                                                                                                                                                   Ś
                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                   Timear PAT 07-0CT-4996
                                                                                                                                                                                                                                                     1 (bases 1 to 4242)
Xu.H. J., Bu.S.-X. and Benedict.W.E.
Broad Spectrum tumor suppressor qenes, qene products and methods
for lumor suppressor qene therapy
Patent: US 5496731 A 1 05-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16.0 CATAAATTOTITAACITACTAAAAGAAATIGAIACGAGGTACCAAAGIIGATAATGOTATG 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          220 FCAAGACTGTFGAAGAAGTAFGATGTATGTTTGCACGTCTTGAAATTGGAAAAGGACA 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   127 TCAAGACTGTTGAAGAAGTATGATGTATGTTTGCACTCTTCAGCAAATTGGAAAGGACA 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             187 TGTGAACITAIAIAITIGAAAAAAAAGAGAGITGGAIAIGIACIGAAATAAATICIGGA 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           440 TEGGEGAAAAAGITECTEGAAFGACATTTTATTAGCTAAAAGGAAGTATTAGAAAFG 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      400 GAASATGATCTGGTGATTTCATTTCAGTTAATGCTATGTGTCCTTGACTATTTTATAAA 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               450 CTC CACCOCOCATOLOCICAAAGAAGCATATAAAACAGGGTTATACGCATTAATGGT 519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           467 CICTCACCTCCCATGTTGCTCCAAAGAACCATATAAAACAAGTGTTATAAAGGT 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BO ANTGATACAAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATATATAGATGAGGTG 639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  487 AATGATA'AAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATATAGATGAGGTG 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                640 AAAAATGITTATFICAAAAATFIFATACCTFITATGAAFFCUGTTGGACFFGTAACAFCT 699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100 GAPPTAGATGAGATGTGGTTPAPTTTTAGTGGGTACAAAAAAATAGAAATGAGTGTGT 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               280 IGIGAAPITATATATIFGACACAAQCCAGGAGIIFGGATAFCTACTGAAATAAATTGFGGA 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             110 TACTATCATACTACTGAAANAGATTTCATACCTCAGAATGTAAAAGAACTTACTGATTAT 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97.0%; Score 3222.4; DB 6; Length 3232;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1; Indels
                            1280 TILTELCALCTACTIALGITTIAAAIGAGGAITATIGATACT 3323
                                            50 TFPTTCARCCAACTTARGITTTTAAATGAGGATTAFTGATAGT 7
                                                                                                                                   ΞNΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Fred. No. 0;
lve 0; Mismatches
                                                                                                                                              Sequence l from patent US 5496731.
                                                                                                                                   42.12 bp
                                                                                                                                                                                                                                                                                                                                                       Zorganism-"wnknown"
597 c 566 v
                                                                                                                                                                                                                                                                                                                                 Location/Unalitiers
                                                                                                                                                                            118496.1 GI:1598851
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 4224, Conservative
                                                                                                                                                                                                                                                                                                                                                 1212
                                                                                                                                                                                                                                          Unclassitied.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                             1086 a
                                                                                                                                                                                                            Unknown.
                                                                                                                                                                                                                          Unknown
                                                                                                                                                               118496
                                                                                                                                   114436
                                                                                                                                                                                                                                                                                                                                                                                                                        OBELY Match
                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                 801108
                                                                                                                                                                                                                          RSTANISM:
                                                                                                                                                                                                                                                                                                                                                                            HASE COUNT
                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                 HURNA!
                                                                                                     PESTICE 19
                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                     37111
                                                                                                                                                                              VEPSION
                                                                                                                                                                                                                                                                                                                                                                                          118436
                                                                                                                                   1147033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
```

```
1300 GGAACAGATTTGTCTTTCCCATGGATGTGAATGTTAATTTAAAAAGCTTTGAELFT 1359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1600 CCTGTAAGATCTCCAAAGAAAAAGGTTCAACTACGCGTGTAAATTCTACTGCAAATGCA 1659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HITTITTE HIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1660 GAGACAGCAAGCICAGCTIFCAGAGCGAGAAGTAITGAAAIFTAFFITITITA 1719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          000 GEGAATCCAAAAGAAAGIALACIGAAAAGAGIGAAGGALALAGGALACALLIAAAGAG 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .060 AAATTTGCTAAAGCTGTGGGACAGGGTTGTGTGGAAATTGGAATGAGAGAAATAAAAAGTT 1119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1120 GGAGTICGCTTGTATTACCGAGTAATGGALGCATGCTTAAATCAGAAGAAGAAGATTA 1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1180 TCCATTCAAAATTTTTAGCAAAGTTCTGAATGACAACATTTTTTGALATGTCTTTATTGGC 1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1087 TCCATTCAAAAFTTTAGCAAACTTCTGAATGACAAAATTTTTALATGTCTLLATTGGG 1146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1240 TGCGCTCTTGAGGTTGTAATGGCCACATATAGCAGAAGTACATCTCAGAATCTTGATTCT 1299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1420 CATTTAGAACGAFGTGAACATGGAATCATGGAATGCTTTGCATGGTCTCAGATTGAGTT 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1327 CATITAGAACGATGTGAAGGGGAATGGAATGGAATGGTT18GA BGGTLTGAAATLGAAAT 1386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1480 TEATTEGATCTTATTAAACAATCAAAGGGGGGGGGGAGGACTAATCATCAACTGGAATCT 1539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1387 ITATITGATCITATTAAACAATCAAAGGACCGAGAAGGACGAAGIGALGACTIGAATCT 1446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1540 GCFFCFCFCFFTAATCTTCTCTCTCTCAGAATAATCACACTGCAGAAATATGTATCTTTCT T599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1627 CTGTTTFFAAAAAAAGTGTATGGGGTAGGCTATCTFCGGCTAAAFACACATTTGTGAACGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1780 CTTCTGT@GAGGCAGAGAAITAGAAGAIAFAICIGGACCTIITGCAGAACACACACTG 1839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        787 ATTICCTICCACACACACTTAGGACTGTTALGAACACTALCCAACAALLAALGATGTT 846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  940 TTAAATTGAGGAAGGATGAAGCTTGAGAAATGTGATFLGGTTTTTAAGAAGGGAAG 999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            847 TTAAATTCAGCAAGTGATCAACCTTCAGAAAATCTGATTTCCTATTLIAACAACTGCACA 905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               760 AAAGATCTAGATGCAAGATTATTTTTGGATGATGATAAAACTTTTTCAGACTGATACTATA 819
                                                                                                                                                                                                                                                                                                                       880 ATTCCTCCACACACACTCCAGTTAGGACTCTTATGAACACTATCCAACAATTAATGATGATT 939
                                                                   727 GACACTITIGAAACACACAGAAPAPPEGAAAAATIAAPTIGAIGAATAATITIA 786
700 AATGGACTICCAGAGGIIGAAAAICTIICIAAACGAIACGAAAAAIIIALTIAITIAAAAAI 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
```

1746	1899 1806	1959 1866	2019 1926	2079 1986	2139 2046	2199 2106	2259 2166	2319 2226	2379 2286	2439 2346	2499 2406	2559 2466	2619 2526	2679 2586	2739 2646	2799 2706	2859 2766	2919
THEFTER THE PROPERTY OF A STANDARD THE STANDARD THE STANDARD A STANDARD THE STANDARD A S	40 - PARAATRAKTATGAACTCATRAKACACTATTTGCACCAATTATGATGTCTTCCATG 	UU TATGGPATATGCAAAGTGAAGAATATAGACCTTAAATTCAAAATCATTGTAAGAGCATAC 	65. AAGGATOTTICCTCATGATGAGAGATTCAAAGGTGTTTTGATGAAAGAGGG 	20 TATGATESTATTATATTGTATAAGTGGGGGTTGAAGAAAAAAATATT 	89 HIGCACH ANGCHTCCACCAGGCCCCTACCTTGTCACCAATACCTCACATTTCCTCGAAGC HILLHILLHILLHILLHILHHILHHILHHILHHILHHIL	45. OCH FATANGETTICCTAGITTATOCH AGGALTOCH GGAGGAACA PETATA HTCACCC TELLT FELLT	0) CTGAAPACTCATATAAAATTO'AGAAGGTCTGO'AA'AO'TAACAAAAAATGACTCCAAGA CTTTTTTTTTTTTTTTTT	60 ICAAQAALCITAGTALGAATIGTGAATGATGATGAGGACTTGTGAGAAGTGCAGAAATA 	20. AATCAGATGGTATGTAACAGCGACCGGGGGCGCAAAAGAAGTGGTGAAGGAAG	80. OCTAAANTACTGAAAAAACTACGCTTTGATATTGAAGGATCAGATGAAAGAAGAAGA 1411-1411-1411-1411-1411-1411-1411-141	III. AAANATOTOOCAOOAGAGTOVAAATITOAGSAGAAACTGSSCAGAAALGACTICHACTICHACTICHACTICHACTICHACTICHACTACAAAATICHACAAAAAAAAAA	00-ACACCAALGCAAAAGCAGAAAATGAATAGATAGATGATAAATTAAAT	S TGAGGATCTCAGGACCTTGGTGGACACTGTGTACACCTGGATCATTGTCTCTGCACACGG 	20 AUGUGAUTGI ALAACITIROCAGGITCIGITTIRAGGOACATITAANAICHTGAGGOGTOTT 1111111111111111111111111111111	NO TELETO GATALARAA ELGIGA AGADO CAATHOTTI OCOTOAT FICEDA AGACACTI CAAA BOOTO CAATHOTTI LITTI) TIASTOATIGTATTATACAAGATIGAAAATCTTGTGTAAATCCTGCCATTTAAAAAGT 	6 TGTABYAĞALIĞI FEÇEÇETÇÇAAAĞTAAAATIGCIĞI ÖÇTTIMIĞGALAĞI AAĞAAĞA 11 TELET FELLETETETETETETETETETETETETETETETETETET	64 OCOCLASACTOCCACACACACACACACACACACACACACACACATACACATACATATACATACATATATATATATATATATATATATATATATATATATATAT	
	1	190	3.9.1 3.8.1	26.2	857	<u> </u>	220	22.6 22.6	232	2.48	244	250	256	262	8.42 4.62	274 264	280	786
÷	多 圭	5 3	3 f	숙	\$ B	5 8	5 5	5 8	Š €	3 £	<u> </u>	§ ±	÷, <u>÷</u>	충경	in A	왕 윤	8 8	5

```
linear PAI 07-001-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Xu.H.-J., Hu,S.-X. and Benedict,W.F.
Broad spectrum tumor suppressor genes, gene products and methods
for tumor suppressor gene therapy
facent: US 5446.74. A. 2.05-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                         3160 TGTTTTATAAATTTTGGTTTTAATTAAAAGGTGGAAGGAAGGAAGTATAAGA 3219
                                        3040 ATTCACCAAAATTATCCTGAACTCTTCTGCAAAAATGGATATTATTAGAAAATTAGAAAAA 3059
                                                                                                                                                                                                                                          3100 AATIACTAATITTACACATTAGATTTTATITTACTAFTGGAAATCIGATATATGTGTG 3159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3127 TACTATCATACTACTGAAACAGATTTCATACCTCAGAATGTAAAAGAACTTACTGATTAL 3186
2767 GOOCHAGAGHGGGAGHGGTGAHAAGGCAGGCGTGTGTGACTACTTTGCCHFCFFFTGTAC 2926
                                                                                                                                 2980 ATGAACACCCTTAGAAAATGTGTGCTATCTTGCAAATGCAATTFGALLGACLGCCC 3339
                                                                                                                                                                                                                                                                                                                                                                                                                                  3067 TGTTTTATAAAATTTTGCTTTTAATTAAATAAAAGCTGGAAGCAAAGTATAACATATGA 3128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3170 CATAMATICITIAACTIACTAAAAATIGAIACCAGIACCAAAGITGAIAAIGCIAIG 4111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3230 GACCTAGATGAGATGTCGTTCACTTTTACTGAGGTACAGAAAAACATAGAAATGAGTG 3171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           220 TCAAGACTGTTGAAGAAGTATGATGTTTGCACTCTTCAGCAAATTGGAAAGGACA 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100 GACCTAGATGAGATGTCGTTCACTTTAGTGAGCTACAGAAAAAACATAGAAATCAGTGTC 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     160 CATAAATTCTTTAACTTACTAAAAGAAATTGATACCAGIACCAAAGIIGALAAIGCIAIG 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             280 TGTGAACTIATATATTIGACAACAACGASCAGIICSAIAIGIAGIAGIAAATAAATICIGCA 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Gaps
                                                                    2827 CATATAGGIGATGTTTGCTCTTGTTTTATATATATATATATATATATTTTTTTAATTTAAC
                                                                                                                                                      3220 INCTATCATACTACTGAAACAGATITCATACCTCAGAATGTAAAAGAACTTACTGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97.0%; Score 3222.4; DB 6; Length 3232; 100.0%; Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1; indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3280 TTTCTTCATCCAACTTATGTTTTTAAATGAGGATTAITGATAGT 3323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  597 g 1086 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 100.0%; Pred. No. 0; Matches 3223; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        118497 3232 bp
Sequence 2 from patent US 5496731.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism-"unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 118497.1 GI:1598852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unclassified.
! (bases 1 to 3232)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               566 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               983 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            118497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               I18497/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COOR
                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ó
```

340 TTGGTGCTAAAAGTTTCTTGGATCACATTTTTTTTTTTAGCTAAAGGGGAAGTALTAGAAATG 399

2931	459	519 2811	579 2751	639 2691	699 2631	759 2571	819 2511	879 2451	939 2391	999 2331	1059 2271	1119 2211	1179 2151	1239 2091	1299 2031	1359 1971	1419 1911	1479
CHITTHITHITHITHITHITHITHITHITHITHITHITHIT	GAAGATGA PERGEGALI PATILOAGITAA IGCEA GEGIGCETGA PATEFATEAA 	CTCTPARCTECTATGTTGCTCAAGAACCATATAAAACAGGTGTATACCCATTAATGGT CTCTTTTTTTTTT	PPACTECAAN ACCPAGG GAGG ECAGAACAAG GGAGGAATAGAAACAACTAGAA TELETELETELETELETELETELETELETELETELETEL	AATGATACAGAATTATTGAAGTTCTCTGTAAAQAACATGAATGAATATACATGAGCTG 	AAAAATGITITAITITOAAAAAITITATACCITTITATGAATTCTCTGGACTTGTAACACCT	AAF BROTES ARABBIT GAAAAT CITT CIAAAG BATAG BAABAAT ITATCTTAAAAAT HILLIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHI	AAAGATCTAVATGCAAGATTATTTTGGATGATGATGATAAAAGGCTTTGATGATTGTTATA TTTTTTTTTT	OALAGITTEGAAR ACAGAGAGACCCCGGAAAAGTAACCTTGATGAGGGGGGAATGTA 	ATHOCTOCA VACACTOCAGITAGGACTGITATGAACACTATCCAACAATAATGATGATATTATTHING THE THING THING THING THING THING THING THING THING THING TATOCAGITAGGACTGITATGAACACTATGAACAATAATGAATGAT	HJAAATICAGAAGGGGGGCCTICAGAAAACIGATTICCTATTITAAGAGCGCAGA HTT THT HTT HTT HTT HTT HTT HTT HTT HTT	GTGAATCYAAAAAAAAGTATACTGAAAAGAGGAATATAGGATAYATATAAAGAG TTL.TTLTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	AAATTOS TAAAGCTOTOGGBACAGBGTTGTOFOGAAATTGGATCACAGGTAACTT 	ODAGI POPTI IGLATIACOZAGI AA IGGAALOCA IGCTI AAATCAGAAGAAGAACGAITA 	PCCATTCAAAATTTTAACAAACTTCTGAAFGACAACATTTTTCATATGECTTTATTGGCG 	TOPOSTICT FOR STROTANDOSCA ATALAGE ASABARTACA GEORGIA TOTALA HA HA HA HA HA HA HA HA HA HA HA HA HA	GGAAPAGA HEBERTHEP GA LOGAHER GEGETTAA FILAHER HELLEH GAAFGEGETTAA GEGETTAA GEGETTAA GEGETTAA GA GETTAA GA GETTAA GA GA GA GA GA GA GA GA GA GA GA GA G	TAYAANGTGATCGAAAGTTTTATCAAAGCAGAAGGCAACTTGACAAGAAATGATAAAA 	CATTIAGAACGATGTGAACATCGAATCATGGAATCCCTTGCATGGCTCTCAGATCAACT
04,4,7	400	460 2870	520	580 2750	640	700	750	820	880 2450	940	1000	1060 2270	1120 2210	1180 2150	1240	1 400	1360	1420
1:1	07 10b	5 =	5 g	5 £	5 ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ±	S E	5. 5. 12. 42.	5 2	5 = 3	5 3	5 3	5 ±	5 2	5 3	5 3	25 dg	5 g	55

qq	1910	CATITAGAACGAIGIGAACATCGAAGAATCCTTGCATGG ICICAGALLIACT
Oy	1480	TTATTTGAPCTTATTAAACAATCAAAGGACGAGAAGGACCAACTGATCATCATCATCA
qn	1850	TPATTITGE CONTRACTOR AND AN ARCHITECT CONTRACTOR AND ARCHITECT TO A TRACTOR AND A TRACTOR A TRACTOR AND A TRACTOR
ò	1540	GCTTGTCCTCTTAATCTCTCTCCAGAATAATCACACTGCACAGAAATATGTTTTTT
qu	1790	GCTIGLECTIANTCLICATELECTOR AND AN AND AN AND AN AND AND AND AND AN
δĀ	1600	CCLGTAAGATGLCGAAAGAAAAAAGGTIMAACTAGGMGTGTAAATTMTAATGAAATGGA
ପୁଧ	1730	CCTGTAAGATCTCCAAAGAAAAAGGTTCAACTAGGGGGGTAAATTCTACTGCAAATGCA
- QY	1660	GAGACACAAGCAACCTTCCAGACCTTCTACAAGCAATTCAATTCAATTCA
qq	1670	GAGACACAAGCAAGCTTCCAGACCAGAAGCCATTGAAATCTTACTTTTCA
خ. څ •	1720	720 CTGTTTATAAAAAGGGTATACGGCTAGGCGATAAATAAAT
. AC	1780	OTION CANADA CANADA LA MANADA LA CONTROLITA DE LA CANADA C
qq	1550	CTTCTGTCTGAGGACCCAGAATTAGAACATACATCGGACCTTTTCCAGGACCCTG
ΟŸ	1840	CACAATGAGTATGAACTCATGAGAGATAGGAACTTGGAACTAAGATTATGAACTGTTGCATG
qo	1490	CAGAATGAGTFGTTTTTTTTTTTTTTTTTTTTTTTTTTTT
Óγ	1900	TATGGCATATGCAAAGTGAAGAATATAGACTTAAATTCAAAATGATTGTAGAGAGATAC
qn	14 40	TATGGCATATGCAAAAGGAAGATATAGACCTTAAATTCAAAATCATGTAACAGCATAC
οy	1960	AAGGATETTECTCATOTOTICAGGAGAATICAAAGGGTTI DALGAAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAG
qq	1370	AAGGATCTTCCTCATGCTGTICAGGAGATCATCAAAGGTGTTITGATCAAAGAAGAG
ολ	2020	TATCATTCTATTATACTATAAATTCGGTCTCATGAAGAATGAAAGAAA
qq	1310	TATGATTCTATTATAGTATTCTATAAGTGGGTCTTCATGCAGAGACTGAAAAATATT
ογ	2080	######################################
q _O	1250	TTGCAGTATGCTTGCACGAGGCCCCTTGTGACCAATACCTCACATTCTGGAAGC
ΟŸ	2140	CCTFACAAGTTTCCTAGTTCACCTTTACGATTCCTGGAGGAAATCTATATTTCACCC
qd	1190	CCTTACAAGTITCCTAGIICA.CCIIACGAIICCIGGAGGAACATCTAIATTTCACCC
0y	2200	CTGAAGACTCCATATAAAATTTCAGAAGTCTCCCAACAACAACAAAAAAGA
qq	1130	CHGAAGAGHCCATATAAAATTTCAGAAGGHCTGCCAACACAAAAAAAAAA
δ	2260	PCAAGAAFCTTAGTACAATGGGGAAAATGAGGGGCTTCTGAGAAGFTCTAAAAAAAAAA
qci	1070	TCAAGAATCTTAGTATCAATTGGTGAATCALTGGGGACTTCTGAGAAGTA
ΟY	2320	ANT CAGATOCTATOTAACAGOAGTOT OF OFTIGAAAAGAACTGOTGAAGGAAGAAGTAATTOTT
qq	1010	AATCAGATGTATGTAACAGGGACCGTGTGTGCTCAAAGAGGTGTGAAGGAAG
Οy	2 180	CCTAAACCACTGAAAAACTACGTTTGATATTGAAGGATAGAGATGAAGATGAAATT
qq	950	CCTAAACCACTGAAAAAATTACGTTTGATATTGAAGGTCAGATGAAATAGAAGT
δλ	2440	AAACATCTCCCAGGAGAGTCCAAATTTCAGCAGAAACTGGCAGAAATGACTTCTACTCGA
qc	068	AAACATCTCCCAGGAGGCCCAAATTTCAGCAGAAACTGGCAGAAATGATTTCTACTGGA
Οy	2500	ACACGAATGCAAAAAGCAGAAAATGAATGATGATATCTCAAACAAA
qq	830	ACACGAATGCAAAAGGAGAAAATGATGATAGCATGGATACCTCAAACAAGGAAAGAAA

			•	
261 251 253 591 591	27 29 29 41	2979 351 3039 291 3039	3159 171 3219 111 3279 51	-SEP-2000
GICTCECACACACACACACACACACACACACACACACACACA		TTTAATTTAAC TTTAATTTAAC TTTAATTTAAC ATTGATGCTGCC ATTAGAAAAC AATTAGAAAAAAAAAA	TACTGTGTGCT	ar PAT 08 ator
	STAANTOCTOCE STAANTOCTOCE STAANTOCTOCE TOCTTTATGO SACTACTOCTOCE SACTACTOCTOCE SACTACTOCTOCE SACTACTOCTOCTOCE SACTACTOCTOCTOCTOCTOCTOCTOCTOCTOCTOCTOCTOCTOC	TATGTATTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	EGGATCTGATA TOGATCTGATA TOGATCTGATA TOGATCTGATA TOGATCTGATA TOGATCTGATA TOGATGATA	DNA line or and requi
"TGTGTACAC" "TGTTTACAC"		TATTATTAT 	FATTTACTATT	vic.
CTTGGGGGGCACACACACACACACACACACACACACACAC	HARAMANI HALLIHIH BALACAAN SCICITCCAAN PPOPAAAAC HILLIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHI	TGCTCTTCTTT IIIIIIIIIIIIIIIIIIIIIIIIIII	ACATTAGATTTT [1:10018719 1:10018719 0:2994) Lee,E.YH. 1 qene-cance R134-A 4 m/ R134-A 4 m/ R134-A 4 m/ R134-A 4 m/ R134-A 1 m/
TGAGGATC TCAGGACCTTGGTGGACACTGTACACTCTGGATTCATTGTCTCTCACACTCTGAGATCTCACTGGATTCACTGGATTCACTGGATTCACTGGATTCACTGTTTTTTTT	THAS CALLOLINITIAN CANAGE AND CONTROLLED AND CONTRO	CATATAGGTGATGTTTGCTCTTTTATTATTATTATAGTATATTTTTTTATTTTAAGGTATATTTTTAATTTTAAGGTATATTTTAATTTAAGGTATATTTTAATTTAAGGTATATTTAATTTAAGGTATATTTAATTTAAGGTATATTTTAATTTTAAGGATAAGGTATAAGAAAAGAGAAAAGAGAAAATGTGCTAAAAAATGATGTAATTAAGAAAAAGAGAAAAAGAAAAAA	AATIACTAATITTACACATTAGATTTATTTACTATTGGAATCTGATATACTGTGGGT AATIACTAATITTACACATTAGATTTATTTACTATTGGAATCTGATATACTGTGGGGT AATIACTAAAATTTACATTAAATAAAAAAGATCTGGAATCTGATATACATATCA TGTTTATAAAATTTTGCTTTTAATTAAATAAAAGAGCTGGAAGCTAAAATTATAAAAAAAA	AR091965 AR091965 AR091965.1 GI:10018719 Unknown. Unclassified. (bases to 2994) (bases to 2994) (bases to 2994) (bases to 2994) (constitute and Lee,E.Y. H.P. Refitoblastoma gene-cancer suppressipation/Qualifiers 1. (2994) (constitute and Lee,E.Y. H.P. (bases to 2994) (constitute and Lee,E.Y. H.P. (bases to 2994) (constitute and Lee,E.Y. H.P. (constitute and Lee,E.Y. H.P. (constitute and Le
2560 IGA 2560 IGA 2620 ATG 2680 ITTC 650 ITTC	11. A 11. A	2929 CATA 410 CALA 110 CALA 110 CALA 110 CALA 110 CALA 100 ATPC 290 ATPC 290 ATPC	1100 AATT 230 AATT 110 TGT 170 TGT 170 TGT 170 TACT 170 T	11 12 15 16 16 16 16 16 16 16 16 16 16 16 16 16
5 3 5 3 5 3 3	និត្តតិនិតិ	8 8 8 8 8	3 8 3 8 8 8 8 8	RESULTANDO IN THE PROPERTY OF

```
1221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              : 091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1152 ICATGATAMAACTETTERGACTGATTETATAGACAGITTTGAAACACAGAGAACACUUNU 1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      969 AAATOTGATTTTOOTATTTTAACAACTGCAGTGAATOCAAAAGAAAGTATAGTGAAAAG 1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1092 TAAAACGATACGAAGAAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTATTTTGGA 1151
                                                                                                                                                                                                                                                                                                                                                                                                            249 CTTTGCACTCTTGACAAATTGGAAAGGCATGTGAAATTATATATTGACAAAACCAG 308
                                                                                                                      372 GGAGAAAGTTICAICIGISGAIGGAGIAIIGGGAGGITAIATICAAAAGAAAAAAGGAAT 431
                                                                                                                                                               69 CHOGGGAATCTGTATCTTTATTGCACCAGTTGACCTAGATGAGATGTCGTTTGACTTTAT 128
                                                                                                                                                                                                        432 GEGGGGAATCTGTATTGCAGCAGTGACCTAGATGAGATGTGGTTGACTTTTAC 491
                                                                                                                                                                                                                                               129 TGAGGTACAGAAAAACATAGAAATCAGTGTCCATAAATTCTTTAAGTTACTAAAAGAAAT 188
                                                                                                                                                                                                                                                                                                                                                         612 CITTOCACTCTTCAGCAAATTGGAAAGGACATGTGAACTTATATATTTGACACAACCCAC 671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            429 AATGCTATGTGTCCTTGACTATTTTATTAAAGICICGAGGICCCAIGIIGCICAAAGAACC 488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         489 AIATAAAAGAGGIGILALACCCAITAAIGGITCACCICGAACACCCAGGGGAGGTCAGAA 548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               549 CAGGAGTGCACGATAGCAAAACAAACTAGAAATGAIACAAGAATTATTGAAGTTCTG 508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                912 CAGGAGIGCACGGATAGCAAAACAACTAGAAAAIGATACAAGAATTATIGAAGTICICIG 971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         609 TAAAGAACATGAATGTAATATAGATGAGGTGAAAAAFGTTTATTTCAAAAATFTTGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         729 TANACGATACGAAGAAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTATTTTGGA 788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        789 TCATGATAAAACTCTTCAGACTGATTCTA1AGACAGTTTTGAAACACAGAGAACACAGAAAAG 848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        849 AAAAAGTAAATTIGAIGAAGAGIGAATGIAAIIGGIGGAGAAGTGGAGIIAGGAATIGI 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        909 TATGAACACTATCCAACAATTAATGATGATTTTAAATTCAGCAAGTGATCAACTTCAGA 968
                                             0; Caps
                                                                               180 TOATACCAGTACCAAASIISALAALSCIAISICAASACIGIIGAASAAGAATAIGATGIAIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            309 CAGIICGATAICIACIGAAAIAAAIICIGCAIIGGIGGIAAAAGIIIGIIGGGAIGACAII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R69 TITATIAGGTAAAAGGGGAAGTATIAGAAGGAAGALGATGGGTGATGTCATTTGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               669 TITIATGAATTOTOTTGGAOTTGTAATGTAATGGAGTTGGAGAGGTTGAAAATGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1032 TITTATGAATTCTCTTGGACTTGTAACATCTAATGGACTTCCAGAGGTTGAAAATGTTF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 6; Length 2994;
Matches 2623; Conservative
  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           а
2
                                                                                                                                                                                                                                                                                                                                                                      QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                   된
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                감
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       È
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                               ŏ
                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              è.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
```

AAAGATALADAA AAGATA AAGAAAH HOLJAAAGTOO O SAAAGATHG 1088 AAAGATA AAGATA AAGATTA AAGAAAH HOLJAAAGATOO O SAAAAATHG 111111111111111111111111111111111111		TICACAAGAGAALGATAAAACATTIAGAACGAGGGGAATCATTITETTITETTITETTITETTITETTITETTITE	PHILIPPE HITTER CONTROL CONTROL OF THE HITTER TO THE TOTAL OF THE HITTER TOTAL OF THE THE HITTER OF THE TOTAL OF THE THE HITTER OF THE THE HITTER OF THE THE THE THE THE THE THE THE THE THE	AMBICATTGAAATCTACCTCTTTCACTGTTTTATAAAAAAGTGTATCGGCTAGC 1748 HILLIHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH	TATIANG GOTTOCATGRANGS CATATION OF THE STANDARD CANDING AND A CONTROL OF THE STANDARD CANDING
ACTORACIONAL ACTORACIONAL ACTORACIONAL ACTORACIONAL ACTORACIONAL ACTORACIONAL ACTORACTORACIONAL ACTORACTORAL ACTORACTORAL ACTORACTORALA ACTORACTORALA ACTORACTORALA ACTORACTORALA ACTORALA	AGAAGGAACTIC HISTIFFE GAACCCTEGG HISTIFFE GAACCCTEGG GAACCCTEGG	CHARGARGACCE TRAILCHTHTH HALLHTHTHTH PARCACAGGA AVITACAGGA AVITACAGGA	CCNIANGCATESAALCE CUMMISCHIEMENTON CLAPEROSCIAAATON PHILIPHENIANA CARCESSACTAAATANA TAPCAESSACTAAATANA DHILIPHENIANA	GYTTGGACTAAN HIHIHIHIHIHIH GYTTGAAN CYTTGAAN HIHIHIHIHIHIHIHI ATTCAAN GED TTCATGCAN GED TTCATGCAN GED TTCATGCAN GED TTCATGCAN GED TTCATGCAN GED TTCATGCAN GED TTCATGCAN	
1492 / 1492 / 1089 1452 1149 / 1512 /	2 N 2 N 2 N	1752 Z 1449 C 1812 C		2052 c 2052 c 1749 c 2112 c 1809 t	22.5.2 22.5.2 19.29 (2.7.9.2 19.49 (2.85.2 M 2.85.2 M 2.85.2 M 2.85.2 M
7 8 8 8 8 8	5 4 5 4 5 4	5 3 5 3 5	3 3 3 3 3 3	5 3 5 3 3	5 8 5 8 5 8 5 8 5

```
linear PAT 14-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ÷
2712 GCTCAAAGAAGTGCTGAAGGAAGGAACCTCCTAAACCACTGAAAAAATTAAGA 2771
                                                                                                                                                                                                                                                                                                                                                       2772 TATTGAAGGATCAGATGAAGGAGAAGGAAGTAAACATCTCCCAGGAGAGGTCCAAATTTCA 2841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2169 GATTCCTGGAGGGAACATCTATATTTCACCCTGAAGAGTCCATATAAATTTCAGAAGG 2228
                                                                      25.92 GATTGCTGGAGGGAATALCTATATTTCACCCCTTATATATAAAATT L'AGAAGG 25.91
                                                                                                                        2229 TCTGCCAACAACAAAAATGACTGCAAGALCAAGAATCTTAGTALCAATGGGGAATC 228B
                                                                                                                                                                                              2289 ATTCGGGACTFCTGAGAAGTTCCAGAAATAAATCAGATGGTATGTAACAAAAAAAGT 2448
                                                                                                                                                                                                              2652 ATTGGGGACTICTGAGAAGFTCCAGAAAATAAATGAGATGCTAFGTAAGAGAGAGGT 2711
                                                                                                                                                                                                                                                                  2349 GCTCAAAAGAGTGCTGAAGGAAGCAACCTCCTAAACCACTGAAAAAACTAAGCTTTTGA 2408
                                                                                                                                                                                                                                                                                                                                   2409 TATIGAAGGAICAGAIGAAGCAGAIGGAAGIAAAMAHTICCCAGGAGAGAGIMTICA 2468
                                                                                                                                                                                                                                                                                                                                                                                                         2529 TAGGATGGATACCTCAAACAAGGAAGAAATGAGGATCTCAGGACCTTGGTGAACAGTG 2588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   129 TGAGGTACAGAAAAACATAGAAATCAGTGTCCATAAATTGTTTAACTTACTAAAAGAAAT 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    69 GTGGGGAATCTGTATCTTTATTGCAGCAGTTGACCTAGATGAGATGTCGTCGTTTTAC 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             492 TGAGCTACAGAAAAACATAGAAATCAGTGTCCATAAATTCTTTAACTTACTAAAAGAAAT 551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          189 IGATACCAGTACCAAAGTIGATAAIGCTATGTAGAAGAAGAATTATGATATT 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9. GGAGAAAGTITGATGTGIGGAIGGAGTATTGGGAGGTIALATTCAAAAAAAAAAAAAAACT 68
                                                                                                                                          ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             78.9%; Score 2624; DB 6; Length 2994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2952_TGTACACCTCTGGALIGALIGICLCLCAAAGATGTGATTATT 2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2589 TGTACACCTCTGCALICALTGTCTCTCACACACTCCACTGTAL 26.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Antelman, D., Gregory, R.J. and Wills, K.N. Retinoblastoma fusion polypeptides
Patent: US 6074850-A 3 13-JUN 2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VN∩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2994 bp
Sequence 3 from patent US 6074850.
AR098189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /orqanism-"unknown"
1 618 c 593 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100.0%; P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR098189.1 GT:12807446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 2994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unclassitied.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         974 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOULCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PEFFRENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AR098189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                       g
                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                ć
                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ≘
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                        οy
                                                                                                                                                                                            ŏ
```

ò

4 <u>\$</u>	552 249		611 308
		GIIIG	671
<u>خ</u> غ	(i) (i) (i) (i) (i) (i) (i) (i) (i) (i)	CAGITO	368
क्षेत्र क	469 44.7	ITTATI : ITTATI	428 791
ية بد	424	71-71	
्र इ	484 452	6-6	4 -
ky je	549	–	608 971
क्षु व्	256	r + - r ·	
ठू <u>ब</u>	669 1532	TITIATGANTICICITGGACTIGTAACATCTAATGGACTICCAGAGGTGAAAAACTITC	728
숙충	729	72% TAAAOGATAOGAAGAAATITATCITAAAAATAAAGATCTAGATGCAAGATTATTTTGGA (HELLER) HELLER	788
چ خ	185	ICAIGATAAAACHCTICAGACHGAHICHATAGAGAGTITITGAAGAGAGAAGAAGAGAGAG 	848 1211
<u> </u>	849 1212	AAAAAGTAACCTGATGAAGGAGGGAATGTAATTCCTCCACACACTCCAGTTAGGACTGT FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	908 1271
क ब	90% 1272	TATGAACACTAFCCAACAATTAALGATGATTITAAATTCAGGAAGTGATCAACGGGAGTGTTCAGGAATTTTTTTT	968 1331
7. 4.	369	AAA ECHALITICO LATITITAACAACIGGACAGIGAAFECAAAAGAAAGTATAGIGAAAAG TILLITILITILITILITILITILITILITILITILITI	1028 1391
<u></u>	1029		1088 1451
ية ح	1089		1148
Ş	1149	ALOCALGO ITAAATCAGAAGAACGAITATCCAFTCAAAATTITTAGCAAACTTCTGAAA 	1208
چ ج	97	TGACAAPATTTTCATATGTCTTTATTGGCGTGCTCTTGAGGTTGTAATGGCCACATA 	1268 1631
Ś	1269	TASCAGAAGTACATCTCAGAATCTTGATTCTGGAATTTGTCTTTCCCATGGATTCT	1328

```
1.928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2531
                                                                                                                                                                                                               1449 GGAATOOOTTGGATGGGTGTGAGATTGAGGTTTATTTGATGTTATTAAACAALCAAAGGA 1558
                                                                                                                                                                                                                                                                                               1509 PPGAGAAGGAAGGAAFIGALGACIIGAATEIGCIIGIGELEITAALEFIGEIGCAGAA 1568
                                                                                                                                                                                                                                                                                                                        1569 TAATCACACTGCAGCAGAIAIGTATCITTCTCCTGIAAGATVTCCAAAAAAAAAAAAGTTC 1628
                                                                                                                                                                                                                                                                                                                                                                                                          1749 CIATCTCCGCTAAATACACITIGIGAACGCCITCUGICIGAGCACCCAGAALIAGAACA 1808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1929 CCTIAAATICAAAAICAITGIAAWAGCATACAAGGAICIICCICAIGCTGTTCAGGAGAC 1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2412 GGYCTYCAYGCAGAGACYGAAACAAATATTTGCAGYAYGCYTCCACCAGGCCCCYAC 2471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2652 ATTIGGGGACTTCTGAGAAGTTCCAGAAAATAAATGAGATGGTATGTAACAGGGACGGGG 2711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2349 GCTCAAAAGAAGTGGTGAAGGAAGCAACCTGCTAAACCACTGAAAAAAATTATGTTTTGA 2408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2712 GCTCAAAAGAAGTGCTGAAGGAAGCACCCTCCTAAACCACTGAAAAAAACTACGCTTGA 2771
                                        1329 GAATGTGCTTAATTTAAAAGCCTTTGATTTTACAAAGTGATCGAAAGTTTTATAAAAGT 1388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1629 AAPTAGGGGGAAAA FELGGAAATGGAGAGAGAGAAGGAGGGGGG FFAGAG 1588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1689 CCAGAAGCCATTGAAATCTACCTCTCTTTCACTGTTTTATAAAAAATGTALFGGCTAGF 1748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1809 TATCATCTGGACCTITICCAGCACACACCIGCAGAAIGAGIAIGAACICALGAGAGACAG 1858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2352 ATTCAAACCTGTTTTCATCAAGAAGACGACTATCATTCTATTATAGTATTCTATAACTC 2411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2049 GGTCTTCATGCAGAGTGAAACAAATTTTTGCAGTATGCTTCCACCAGGGGGGTTAT 2108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2169 GATTCCTGGAGGAACATCTATATTTCACCCTCAAGACTCCATATAAAATTTCACAAGG 2228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2229 HOTIGOGAAGAGGAGAAAAAGAGTGGAAGATGAAGAATGTTAGTAFGTFOAFFFOGFFAAFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2592 TCHGCCAACACCAACAAAATGACTCCAAGATCAAGAATCTTAGTATCAATTGGTGAATC 2651
1632 TAGCAGAAGTACATCTCAGAATCTTGATTCTGGAACAGATTGGTCTTTGCCATGGATTCT 1691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2112 CIAHCHCHCGGCTAAATACACTITGIGAAGGCCIHCIGIGIGIGAGGACCCAGAAITAGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1989 AT ICAAANOOFGI FELGAFAAAGAAGGAGTATGA ITCTATITATAGTATATAACTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2532 GATTCCTGGGAGGAACATCTATATTTTACCCTGAAGACTCCATATAAAATTTTCAGAAGG
                                                                                                                            1389 AGAAGGAACTIGACAAGAAAAIGAIAAAAACAIIIAGAACGAIGIGAACATCIGAAITAI
                                                                                                                                                     1812 GGAATCCCTTGCALGGCTCLCAGAITCACCTLIAITTGATCTTATTAAACAATCAAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1869 GCATTEGGGCCAAATTATGATGTGCATGTAFGCCATATGCAAGTGAAGTATATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2109 CILGECACIDATACICACAITCCICGAAGCCCIIACAAGTICCIAGTICAACHIACO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2289 ATTERGRAPHERAGARARTEPERAKANATANATPANATORGANESTANGANANGONASTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
--
                                        ò
                                                                                  qu
                                                                                                                            ŏ
                                                                                                                                                                    qq
                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                    ó
                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            òγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      òγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ч
```

```
PAT 20-JUN-2002
2409 TATTGAGGATGAGATGAAGGAGGAAGTAAAGAFCTGGCAGGAGAGTGGAAATTTGA 2468
                                 2772. TAFEGAAGSAFCAGAFGAAGGAAGTAAACATAAACATETCOCAGGAGAGTCOAAATTTCA 2831
                                                                                                                                                    2469 GCAGAAACHGGCAGAAALGACHTICHACHGGAACACGAAAAGCAAAAGCAGAAAHGAAHGA 2528
                                                                                                                                                                                                                               25.29 TAGEATGGATACCTCAAACAAGGAAGGAAATGAGGATGTCAGGAACTTGGTGGACACTG 2588
                                                                                                                                                                                                                                                                                                                                                  THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FERTILITY OF THE FE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               THY TOATACTAGTACTAAAGTESATAATGTTATGTCAAGACGTTGAAGAAGTATGATGTATT 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 409 CAGITTOGATATCIACIGAAATAAATICIGCATIGGIAAAAAGITICITGGATCACAIT 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     469 JEFALLAGGIAAAGGGGAAGTALIAGAAATGGAAGATGATGTGATTTGAGTT 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.29 AATGCTATGTGTCCTTGACTATTTATTAAACTGTGACCTGCCATGTTGCTGAAAGAACC 488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HITTH FELLECT GASTALL TATTABACT CTCACCCATGLTCT CAACACACC 851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             69 GEGGGGAATGTGTATCTTTATTGCAGCAGTTGACCTAGATGAGATGTCGTTCACTTTTAC 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          129 TGAGTIAGAGAAAAAAAIAGAAALGAGTGGATAAATTGTTTAAGTTAGTAAAAGAAAT 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        249 GTTTGCACTCTCAGCAAATTGGAAAGGACATGTGAACTTATATATTGACACAGCGGGG 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  612 GILLOGACHCHPAGGAAFIGGAAAGGACAIGTGAACHATATHGACACAGAG 671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               472 GGAGAAAGTTTCATGTGGGATGGAGTATTGGGAGGTTATATTTCAAAAGAAAAAGGAACT 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          O; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9 GGAGAAAGTTTCATCTGTGGALGGAGTATTGGGAGGTTATATTCAAAAGAAAAAGGAACT 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            492 TGAGGTAGAAAAAAAATAAAATGAGTGTCCATAAATTGTTTAACTTACTAAAAGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     552 TOATACCAGTACCAAAGTIGATAATGCTATGTCAAGACTGTTGAAGAAGTATGATGTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 6; Length 2994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2589 TOTAMACCIMICATIMATIGICACICACAGAIGIGAMITOTAL 2631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2952 TGTACACCETGGATTCATTGT-TCTCACAGAGIGTGACTGTAT 2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    i (bases 1 to 2994)
Antelman, D., Gregory, R.J. and Wills, K.N.
Retinolastoma fusion proteins
Patent: US APPA-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VΝΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 2623; I
Pred. No. 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ARZU7831
Sequence 3 from patent US 6379927.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
1. . 2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /orqunism-"unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                543 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        75.7
106.0%, Fr.
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AR207831.1 GI:21507687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            618 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 2623; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unclassitied.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    174 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AR207841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOUTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     - JetANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESHEL 14
AP207831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HOTEKNAT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KLYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HILLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 XIIIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            포, 포르 X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                   Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
```

```
1508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1089 TGTCGAAATTGGATCACAGCGATACAAACTTGGAGTTGGCTTGTATTACCAGTAATGGA 1148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1512 ATCCATGCTTAAATCAGAAGAAGGATTATCCATTCAAAATTTTAGGAAACTTGAA 1571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1812 GGAATECETTGCATGGETETCAGATTCACCTTTALTTGATCTTTATTAAACAALCAAAGGA 1871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1509 COGAGAAGGACCAACTGATCACCITGAAICIGCITGICCICITAATCTTCCTCTCCCAGAA 1568
                                                                                                                                                                                                  972 TAAAGAACATGAALGIAALATAGATGAGGTGAAAAAIGTTAALITCAAAAAITTTALAOOO 1031
                                                                                                                                                                                                                                                                              1032 TTTTATGAATTCTTGGACTTGTAACATCTAATGGACTTCCAGAGGTTGAAAATCTTTC 1091
                                                                                                                                                                                                                                                                                                                                                          092 TABACGATACGAAGAAATITATCTTABABATAAAGATCTAGATGAAGATTATITTTGGA 1151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        272 FATGAACACTATCCAACAATTAATGATGATTTTTAAATTCAGCAAGTGATGAAGTTTGAGA 1331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1149 ATCCATGCTTAAATCAGAAGAAGAAGATTATCCATTCAAAATTTTAGCAAACTTCTGAA 1208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1209 TGACAACATTTTTCATATGTCTTTATTGGGGTGCGCTCTTGAGGGTTCTAATGGCCAATA 1268
                                                                                                                                                                                                                                                                                                                      729 TAAACGATACGAAGAAATFTATCTTAAAAATAAAGATCTAGATGGAAGATTATFTFGGA 788
                                                                                                                                                                                                                                                                                                                                                                                                    789 TCATGATAAAACTCTTCAGACTGATTCTATAGACATTTTGAAACACAGAGACACACG 848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              909 TATGAACACTATCCAACAATTAATGATGTTTAAATTCAGCAAGTGATCAACCTTCAGA 968
                                                                                                 609 TANAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATTTTATACC 668
                                                                                                                                                                                                                                      669 THTTATGAATHCTCLIGGACTTGTAACAICIAATGGAGTLICCAGAGGILGAAAALFTLL 728
                   549 CAGGAGIGGACGGAIAGCAAAACAACIAGAAAATGAIACAAGAAIIAIIGAAGIIGTGIG 608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       489 ATATAAAACAGGTGTTATACGGGTTAATGGTTCACCTCAAACAGGCCAAGGGTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1029 AGTGAAGGATATAGGATACATCTTTAAAGAGAATTTGCTAAAGCTGTGTGGAGAGGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1329 GAATGTGCTTAATTTAAAAGCCTTTGATTTTTACAAAGTGATCGAAAGTTTTTACAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1449 GGAATFOOTTFGCATGGCTFCFCAGATFFCACTFTTATTFGATGTTTTAARGAAFGAAFGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  849 AAAAAGTAAGCTTGALGAAGAGGTGAALGTAALFCCTCCAGACTCCAGAGTLAAGAACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1752 AGAAGGCAACTTGACAAGAGAAATGATAAAAACATTTAGAACGATGTGAACATGGAATGAT
                                                                                                                                                                                                                                                           .
دې
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>2</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>a</u>
                                                                            ò
                                                                                                                                                          ò
                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \stackrel{\sim}{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ਰ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \overset{\circ}{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \overset{\circ}{\sim}
```

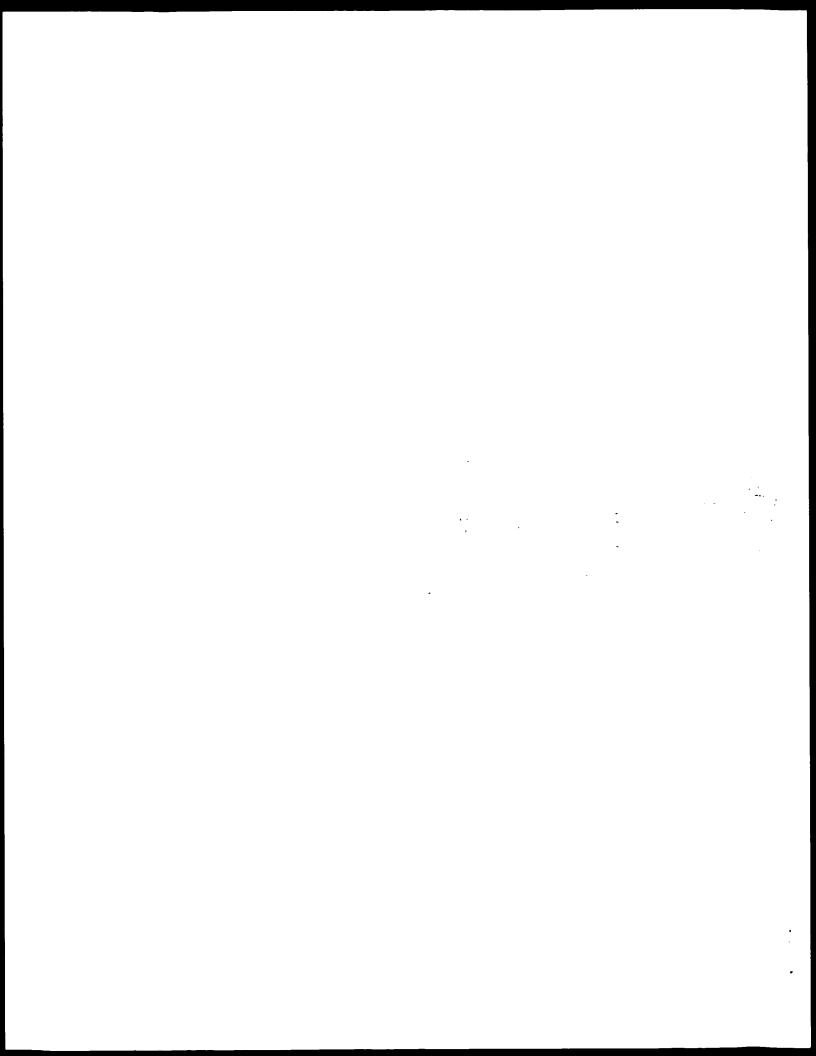
```
23.2. TAATOHOOFII (HOOFII HOOFII                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1+29 AACTAGESGIGTAAATTCTACTGCAAATGCAGAGCAAGCAACTCAGCTTGCAGAG 1588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1689 CCAGAAAGCCATTGAAATCTACCTCTTTTCACTGTTTTATAAAAAAGTGTATCGGCTAGC 1748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2052 CONGANGOCATIGAAATCTACCTCTTTCACTGTTTTATAAAAAAGTGTATCGGCTAGC 2111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1929 GOLLAAALICAAAATCATTGLAAFAFFALAGAAGGATGTTFGCTGATGCTGLFCAGGAGAG 1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2292 OCTIANALICANAATCALIGIAACAGCALACAAGGAICTICCICATGCIGITCAGGAGAC 2351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1989 ALTCAAANGTGITIIGATCAAAGAAGAAGTATAATATATATATATATAAGIC 2048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2049 GGTCTTCATGCAGAGACTGAAAACAAATATTTGCAGTAGGTTCCACCACCACCCCTAC 2108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2109 CITGLOACCAATAOTITAATA ITOTITAAAAGTTIAAAAGELIOTIAAAAGELIOTIAAAGTAAAAGT 2168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2472 CITGICACCAATACCICACATGCICGAAGCCCIIACAAGIIICCIAGIICACCCIIACG 2531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         L169 GATICCIGGAGGGAACAICTATATTICACCCTGAAGAGTCCATATAAATTCACAAAAG 2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2532 GATICCI GGAGGGAACALCTATATTCACCCCIGAAGACTCCATATAAAATTCAGAAGG 2591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2229 TOTGOCAACCAACAAAAATGACTGGAAGAAGAAGAATTTAATATAADT99419AALG 2288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.449 GOTCHARARGARGIGGIGGARGGARGCARCCCTCCTARACCACIGAAAAAACIACGCITIIGA 2408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2832 SPANARATERSPRANARSANTETANTINEHHHHHHHHHHHHHHHHHHHHHHH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2529 TAKKTATRIATAKTTOAAANTAKKAAAATKAKKAATMTOAGANTTEKTTEKTARAYNTT 25188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLITTELLIT
[749] CLATOLOCIONAMIADAPITICIDA AGGORPTICITO I CAGARO AGGATTAGAAÇA 1808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LILZ CTATCTCCGGCTAAATACACTTGGGACCTTCTGTCTGAGCACCCAGAATTAGAACA 2171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1869 GCATTTGGACCAAATTATGATGTGTTCCATGTATGGCATATGCAAAGTGAAGATATAGA 1928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2652 ATTCGGGACTICTGAGANITCCAGAAATAAATGAGATGGTATGTAACAGGGACGGTGT 2711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2712 GOLGAAAAGAAOTGOTGAAGGAAAGAAAGGETOGTAAAGGAAGTGAAAAAAGTAAGGGTTTGA 2771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2169 GPAGAAATIGMMAAATIGAPTPMIAMTTMGGAAGAATGGAAAAGGAGAAAATGA 2528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HILLETTILETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETTILLETT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2589 IGIACACHTEIGGAITCATHEICICACAGAIGIGACIGIAI 2631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ==
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
```

```
linear PAI 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ..
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08/801092 PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 69 GTGGGGAATGTGTATTTTTATTTGCAGCAGTTGACGTAGATGAGATGTCGTTTAGTTTAG 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          369 TITATIAGTTAAAGGGGAAATAITAGAAAIGGAAGAGAAGIGGGGGAITTGAGIT 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  489 ATATAAAAFAFFFFTATAFFFATTAATGGTTONOLOGAACACCCAGGCGAGGTCAGAA 548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9 GGAGAAAAGTTTCATCTCGGGAGTATTGGAGTATTGGAGGTATATTCAAAAGGAACT 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    792 AATGGTAIGTGCTTGACTAITITAIIAAACIGIGAAGIGGGGAIGIGGG AAAGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           129 TGAGCTACAGAAAAACATAGAAATCAGTGTCCATAAATTCTTTAACTTACTAAAAGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       249 GITTIGGACTICTTCACCAAATTGGAAAGGACATGTGAACTTATATATTTGACAACAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    309 CASTICGATALCIACIGAAATAAAIICIGCAIIGGIGCIAAAAASIIICIIGGAICACAII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          429 AATGCTATGTGTCTTTGACTATTTTAAACTCTCACCTCCCATGTTGCTCAAAGAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              189 TGATACCAGTACCAAAGTIGATAAIGCIAIGICAAGACIGIIGAAGAAGTATGAIGIAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     :0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 2994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PR 15-NOV-1995 US 98/751517,14-PER-1997 US 09, DOUGLAS ANTELMAN, RICHARD J GREGORY, KENNETH N WILLS PC CO7H21,04,207Y/70°, AK-1K3R/70°,                                        Lossue specific expression of retinoblastoma protein. BD009728
                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 2994)
Artclman,D., Gregory,R.J. and Wills.K.N.
Tissue specific expression of retinublastoma protein
Parent, JP 20015@0439-A 2 21-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism-'Unidentified'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 2623,
Pred. No. 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism-"unidentified"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xrcf-"taxon:32644"
618 c 593 g 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-NOV-1997 JP 1998522958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                              HD009728.1 G1:18638101 PP 2001509638-8/2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JP 2001503538-A/2
21-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Topology: Linear;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              78.98,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 2623; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unidentitied
                                                                                                                                                                                                                              unidentified.
unidentified
                                                                                                                                                                                                                                                                                                         unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       974 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CANJI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                       DEFINITION
                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
RD009728
                                                                                                                                                                                          Sud⊖Ma.da
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
```

š :	243	C'AGGATTO'ACCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	
3 5 5	51.5	CROGREDO ACORTACCAMANCAMO ROMANA TRATACAMORATIATEGA OFICE STEED A A A A CONTROL SA DESCRIPCIÓN DE SERVICE DE A A CONTROL SA A A A CONTROL SA A A A CONTROL SA A A A CONTROL SA A A A CONTROL SA A A CONTROL SA A A CONTROL SA A A CONTROL SA A A CONTROL SA A A CONTROL SA A A CONTROL SA A CONTROL	
<u> </u>	715	HILLITHTETTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	
<u> </u>	£883 10.82	TITITATGAATICICITGGACITGTAACATCTAATGGACITCCAGAGGTTGAAAATCTITC 728 HILLELLILLILLILLILLILLILLILLILLILLILLILLI	
5 5	727 1992	JAAANNALANGAGAAATITTITOGA 788 TILLITTITTITTITTITTITTITTITTITTITTITTITT	
75 GP	789	TO A COMPANAMENT OF COMPANY AND A CONTROL OF THE CONTROL OF CONTROL OF THE CONTRO	
5 £	1212	449 AAAAAGTAAPOTTGATGAAGAGGGGAATGTAATTCCTCCACACACTCTCGAGTTAGGACTGT 908 	
5 3	909	TATGARCACTATCCARCACTTALGATGATTTAAATTCAGCAAGTGATCAGA 968 	
5 3	969	AAATCIGATITETTATTITAAGAACIGPAPAGIGAATGCAAAAGAAGTATACIGAAAAG 1028 HILLITTITTITTITTITTITTITTITTITTITTITTITTI	
\$ =	1029	ASTRAMAMATALAMAMATCITTAAABAAAATTTGCTAAAGCTGTGGGGACAGGGTTG 1088 	
45 43	1089	TOT COAALTOOT CA'AGGGATACAAACTTGGATTCGCTTGTATTAGCGAGTAATGGA 1148 TOT OTTOT TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TAGGAGTAATGGA 1511 TOT COAAATTGGATCACAGGGATACAAACTTGGAGTTCGCTTGTATTAGCGAGTAATGGA 1511	
5 3	1149	ALCCATGCTTTAAATGAGAAGAAGGATTALGCATTCAAAATTTTAGGAAAGTTGTGAA 1208 HILLILLILLILLILLILLILLILLILLILLILLILLILL	
5 3	1509	TORCARCATTITICATALGICTITATIGGCGIGGGCTCTTGAGGTTGIAATGGCCACATA 1268 HTTLLTTTTTTCATALGICTITATIGGCGCTCTTGAGGCTTGITTTTTTTTTTTTT	
45	1269	FRACAGAACTACA TCAGAA FCTIGATICIGGAACAGA FFFCTCTCTTICCCATGGATTCT 1328 	
5 3	1.429	GAATGEGETTAALITAAAAGCETTIGATTITIACAAAGTGATGGAAGETTTATGAAAGC 1388 FELFETTITITITITITITITITITITITITITITITITITIT	
2 G	1389	AGAAGGAACTTGACAAGAGAAATGATAAAACATTTAGAAGGATGTGGAACATCAT 1448 	
5 3	1449	GGAATCCTTGTALGGTCTCAGATCAGCTTTAFTGATCTTATTAAACAATCAAAGGA 1508 HTTLLTTTLTTTTLTTTTTTTTTTTTTTTTTTTTAAAGGA 1871 GGAATCCTTGTAGGCTCTCAGATCAGCTTATTGATCTTATTAAACAATCAAAGGA 1871	
5 £	1503	PPGAGAAGGACAACTGATGACGTTGAALGTGGTGTGTGTTAATCTTGGTGTGCAGAA 1568 HTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	
5 3	1569	TAATCACACTGCAGAAATAIGIATCIITCIGGGGAAGAAGAAGAAAAAAGGTTC 1628 	

```
1749 CIATCICCGGCIAAAIACACITIGIGAACGCCTICIGICTGAGCACCCAGAATIAGAACA 1808
                                                                                                                                                          1809 TATCATCTGGACCCTTTCCAGCACACCCTGCAGAATGAGTATGAATCATGAGAGACAG 1868
                                                                                                                                                                                                                                          2172 TATCATCTGGACCCTTTTCCAGCACACCCTGCAGAATGAGIAIGAATA AGAGAGACACACACA
                                                                                                                                                                                                                                                                             1869 GCATTIGGACCAAATIAIGAIGIICCAIGIAIGGCAIAIAGCAAAGIGAAGAAIAIAGA 1928
                                                                                                                                                                                                                                                                                                 1929 CCTTAAATTCAAAACATGAAGAGCATACAAGAATGTTCCTCATGTTCAGGAGAC 1988
                                                                                                                                                                                                                                                                                                                                                                  2292 CCTTAAATTCAAAATCATGTAACAGCATAYAAGGATCTTCCTCATGTTGTTGTAAAAAACA 269
                                                                                                                                                                                                                                                                                                                                                                                                                       1989 ATTCAAACGIGTIFIGALCAAAGAGGGGGIAFGAFIGIALAAGHAFICTAFAATIC ZUAH
                                                                                                                                                                                                                                                                                                                                                                                                                                                      2352 ATTCAAACGIGITIIGAICAAAGAAGAAGAAGIAIGAITICIATIAIAAGIG 2411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2109 CTTGTCACAATACCTCACATTCCTCGAAGCCCTTACAAGTTTCCTAGTTCACCTTACG 2168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2472 CITGLCACCAATACCICCAAAACCCIIA.AAGIIICCIAGII A CCTTACG 2531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2169 GATTICCTGGAGGAACAITTAIATTTCACCTTGAAGAGTCCATATAAAATTTCAGAAGG 2228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2532 GATTCCTGGAGGGAACATCTATATTTCACCCTGAAGAGTCCATATAAAATTTCAGAAGG 2591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2229 TCTGCCAACAACAAAAATGACTCCAAGATGAAGAATCTTAGTATCAATTGGTSAATC 2288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2592 ICTGCCAACAACAACAAAAATGACTCCAAGATGAAGAATGTTAGTATGAATTGGTGAATG 2651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2349 GCTCAAAAAGAAGTGCTGAAGGAAGCTTCTAAATTACTGAAAAAATTACTTTGA 2408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2409 INTEGANGGATCAGATGAAGCAGATGGAAGTAAACATCTCCCAGGAGAGTCAAATTTCA 2468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2529 TAGGATGGATAPPTGAAAPAAGGAAGAAGAAFGAGGALTTPAGGACCTTGCFCCACACTC 2588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2892 TAGGATGGATACCTCAAACAAGAGAAAATGAGGATCTCAGGACTTGGAGACACTG 2951
                                                                     1689 CCAGAAGCCATTGAAATCTACCTCTTTCACTGTTTTATAAAAAAGTGTATCGGTAGG 1748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2712 GCTCAAAAGAAGTGCTGAAGGAAGCAACCTCCTAAACCACTGAAAAAACTACGCTTTGA 2771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2772 TATLGAACGATCAGATGAACCAGATGGAACTAAACATCTCCAGGAGACTCCAAATTIGA 2831
2589 IGIACACCTCTGGATTCATTGTCTCTCACACATGTGACTGTAT 2641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2952 TGTACACCTCTGCATTCATTGTCTCTCACACAGTGACTGTAF 2994
                                  q
                                                                     ò
                                                                                                    iop.
                                                                                                                                      ć
                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
                                                                                                                                                                                                         ^{\circ}
                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

Search completed: January 17, 2003, 18:06:18 Job time : 5546.29 secs



```
M15400 Human retin
A01444 H Sapieus D
ARG72631 Sequence
AE572032 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 118497 Sequence 2
El2560 cDNA encodi
M26491 Mouse retin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D25234 Rattus norv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BD009728 Lissue sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MZ8419 Human retin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IOS411 Sequence 1
M34647 Human retin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   L41870 Homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ARO91965 Sequence
ARO98189 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              109369 Sequence 1
Ak144797 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ARZ07831 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181465 Sequence 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AX 330701 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred, No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               beset iption
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E12560
MUSPP105RB
RATRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IO5311
BUMRBALKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HUMRB I MRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AR098189
AR207841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AR072031
AR072032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AF:44797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BDC09728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR091965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX330701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HUMKHSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HUMRBS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                118496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 109369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A01444
                          em_htq_hum:*
em_htq_inv:*
em_htq_other:*
em_htq_other:*
                                                                                                                                                                                                                                                                                                                                                                              em_htgo_other:*
                                                                                                                                                                                                                                                                              om_sy:*
om_htgo.hum:*
                                                                                                                                                                                                                                                                                                                                                +: em_ht qo_mus: *
                                                                                                                                                                                                                                                    cm_htq_vrt:*
                                                                                                                                                       em_htq_pln:*
                                                                                                                                                                                     em_htq_rod:*
                                                                                                                                                                                                                   em_ht.q_mam:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ouery
Match Length DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3232
44591
44591
34541
34541
3455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4740
4580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4597
4600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98.
97.
22xcxcxcxxxx44

20xcxcxxxxxxx44

20xx43xxxxxx4

10xx4

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     りんりょうちょう そって ちゅうしょ としょう ちゅんり ちゅんりょう ちゅんりょう とんと とき そくて ちょうしょ しょう ちゅんり ちゅんり ちゅんり ちゅんしょ ちゅんしょ ちゅんしゅん
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ်
လ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Model Homes principles and LDEV-xib

Local Homes principles and LDEV-xib

Local Homes principles and LDEV-xib

Local Homes Local Homes Local Homes Local Local Local Local Local Local Local LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOCAL LOC
                                                                                                                                                                                                                                          (Without aliquments)
6678.212 Million cell updates/sec
                                                                                                                                                                                                         January 17, 2003, 18:15:29; Search time 4808,78 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                 1 MDFTAL/QKLKIPPHVREKA.....TRMQKQKMNDSMDTSNKEEK 874
                   Genfore version 5.1.3 Copyright (c) 1993 \times 2003. Compugen Ltd.
                                                                                                                                                 nucleic search, using trame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2054640 seqs, 14551402878 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                BLOSUM6.2
Xidopp 10.0 , Xidopoxt (
Yidopp 10.0 , Yidopoxt (
Fidopp 6.0 , Fidopoxt (
Fidopp 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post processing: Minimum Match 0%
Maximum Match 100%
                                                                                                                                                                                                                                                                                                                                      US 09 026 459A 31
4504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Securing table:
                                                                                                                                                 misterin W
                                                                                                                                                                                                                                                                                                                                                                                                     Sequences
                                                                                                                                                                                                               Ruth on:
```

ALLICINMENTS

D55627 Ratius norv U50850 Mns musculu

X74594 H.Sapiens m

HSRB2F130

AY125075 Danio rer B27177 Mus musculu

AYCOR289 Oryzias 1

AFTG2861 Oncorhym

X72218 G.domesticu Boolla Gallus qail Nouzze Bryirides e AF240242 Canis tam

> NVERTINE AF2 40742 AF102861 AY125075

> > 1554 3386

2538

2581

3435

CORET TAR

000114

Heesto Mus musculu

AXZB1827 Sequence

Ll4812 Human retin BCC42247 Homo sapi Rbr 2 retin

MMU27177 HUMP107B

27.40 944 486.4 4960

808

101

AX281827

3.403

799 779.5 775

qb ro:*

db sy:∗

ab om: *
ab bat: *
ab pat: *
ab pat: *

qb ba:* qb htq:* qb in:*

Gentembil: *

atabase

*:01:1 hum: *

म्या एवः

÷ ₹ E. ξ

***** : = <u>I</u>

em mu;* em_om:* *: VOLIMA enn pat:

H.

s s

≰:un=wə

ARD 18697

AR059584

HSP130K

BC034490

4908 2808

HUMP 107A AR078225

X76061 H.sapiens p

Sequence ARCCY584 Sequence BC034490 Bome sapi

M74547 H. Sapiens I

ARU78225 Sequence Hertl Sequence 1 Latte Sequence 1

RESULT 1

```
PAT 08-SEF-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HELD HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELLIH HELI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HITTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    82 tysčiaticAspthrSerthrtysValAspAsnAlaMetSerArgl.euleulystysrtyr 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        944 AAAGAAATTGATACCAGTACCAAGTTGATAATGCTATGTCAAGACGGTGTTGAAGAGAAGTAT 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  142 illeThrPhei,eulleuAlaiysGlyGluVali.euGlimAtGluAspAspI.euValilleSer 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16.2 PheGlnLeumetLeuCysValLeuAspTyrFheIleLysLeuSerProFroMetLeuLeu 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      202 GlyglinAsnArdScrAlaArdilcAlaLysGlnLeuGluAsnAspThrArgileileGlu 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        904 GGTCAGAACAGGAGAGTGCAGGGATAAGCAAACAAATAGAAAATGATACAAAATTATTGAA 963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              42 ThrPhcThrGluLeuGlnLysAsuileGluIleSerValHisLysPheFheAsnLeuLeu 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 AspPheThrAluLeuCysGlnLysLeuLysIleProAspHisValArgGluArgAlaTrp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       122 GlnProSerSerSerIleSerThrGluIleAsnSerAlaLeuValLeuLysValSerTrp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LysGluProTyrLysThrAlaValIleProIleAsnGlySerProArqThrProArqArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ther,W.-H. and Lee,E.Y.-H.P.
Retinoblastoma gene-cancer suppressor and regulator
Patent. US 5998134 A 4 07 DEC-1999,
                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conscr™a⁺iva.
                                                      ÜNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ROR +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches:
                             2994 bp
Sequence 4 from patent US 5998134.
AR091965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-09 026-459A-31 (1-874) x AR091965 (1-2994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism-"unknown"
kle ~ 544 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             594 3
                                                                                                                                                                                 AR091965 1 GT 10018719
                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 2994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4499.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ्ष प्रव
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .2994
                                                                                                                                                                                                                                                                                                                                                                                      Unriassifind
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Lawal Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F $65
                                                                                                                                                                                                                                                                                   Unknown.
                                                                                                                                                                                                                                                                                                                                    Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fercent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Onery Matable
                                                                                        DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                               RGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                  KEFEKEN.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
Aprilians
                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                           VICESTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Prod. W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RIGIN
                                                                                                                                                                                                                                                                                   SOURCE
                                       50.01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ê
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
```

```
1384 CTGAAAAGAGTGAAGATATATAGATACATCTTTAAAGAAATTTGCTAAAAGCTGTGGGA 1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    964 GTTCTGTAAAGAAGATGTAATGTAATATAGATGAGGTGAAAAATGTTTATTTGAAAAAT 1023
                                                                                                                                                                                                                                 1144 TTTTTGGATGATGATAAAACTGTTCAGACTGATTCTATAGACAGATTTGAAAGAGAGAAA 1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1504 GTAATGGAATCCATGCTTAAATCAGAAGAAGGATTATCCATTCAAAATTTTAGCAAA 1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     282 FheleuAspHisAspLysThiLeuGlifhiAspSerileAspSerPheGluThrGlnArg 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     402 VilMotflasorMotLeaLysSerSlaslashartEauSerIleSlasarEheserLys 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    422 LeaLeuAsnAspAsnIlePheHisMetSerLeuLeuAlaCysAlaLeuGluValValMet 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      442 AlaThrTyrSerArgSerThrSerGlnAsnLeuAspSerGlyThrAspLeuSerPhePro 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     462 TrpIleLeuAsnValLeuAsnLeuLysAlaPheAspPheTyrLysValIleGluSerPhe 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      482 HeLysAlaCluClyAsnLeuThrArgCluMetileLysHisLeuCluArgCysGluHis 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       522 SerLysAspArqGluGlyFroThrAspHisLeuGluSerAlaCysProLeuAsnLeuPro 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        542 LeuGinasnasnHisThralaAlaAspMet!yrLeuSerProValArgSerProLysLys 561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       562 LysGlyScrThrThrArgValAsnScrThrAlaAsnAlaGluThrGlnAlaThrSerAla 581
222 ValleudystyssluHisGludysAsmileAspGluVallysAsmValTyrPheLysAsm 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        582 PheGlnThrGlnLysProLeuLysSerThrSerLeuSerLeuPheTyrLysValTyr 601
                                                                                                                               262 AsmicuScriysArgTyrCluSlaileTyriCalysAsmiysAspiruAspAlaArdica
                                                                                                                                                                                                                                                                                                                                  1264 AGGAGTGTTATGAAGAGTATGAGAATTAALGATGATTTAAATTGAGGAAGTGATGAA
                                                                                                                                                                                                                                                                                                                                                                                                    342 ProSerGluAsnLeuIleSerTyrPheAsnAsnCysThrValAsnProLysGluSerIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ć
                                                                                                                                                                                                                                                                                                  Ωŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qu
                                                                                                                                                                                                                                                                 :7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ō
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

Location/Qualitiers

FEATURES

.2994

```
linear PAT 14-FEB-2001
                                                                                                                            702 Tyrasii Sor ValiphoMotolinarqi, coutysthrasii Teteurchii yra Laserthrarq 721
11 HTELETELETHII HTELETHII HTELETHII HTELETHII HTELETHII HTELETHII T
2404 TALAAN LOGISTY I CALGOSASAN GAAAQAAA HELITI GCAGIALOOTTOCACCAGG 2463
2044 TECCAGAGAAGGALGAAAGLAGGIGITITETTITETTATAAAAAGIGTAT 2103
                                                                           444 CAGGASYALICAAAASIGIIIIGALCAAAGAAGAAGAGAGAGATCATCTATTATAGTATIC 2403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2224 AGAGACOCATTIGGACCAATTAIGATGIGTIGCATGTATGCATATGCAAAGTGAAG 2283
                                                                                                                                                                                                                                                                                                                      2284 AATATAGACCTIAAATTCAAAATGATTGTAAGAGGATAGAAGGATCTTGCTGATGCTT 2343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2584 TCAGAAGGTGTGCCAACACDAAAAATGACTCCAAGATCAAGAAFCTTAGTCAATT 2643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2764 COCOLOGALATIGAAGGALCAGALGAAGCAGGAAGTAAACATGEGCAGGAGAGTGC 2823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2824 AAATIICABBAABBAGBBAAABAATGACTICTACTCGAACAGGAATGGAAAAGCAGAAA 2883
                                                                                                                                                                                                         642 ArgaspargHistonAspClnTloMctMetCysScrMctTyrClyTlcCystysVallys 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             602 ArateuAlaTyrLeuArateuAsnThrLeuCysGluArgLeuLeuSerGluHisPrGGlu 621
                                                                                                                                                                                                                                                                                   662 AsnileAspLeatyseBetystleileValThrAlaTyrtysAspLeuProHisAlaVal 681
                                                                                                                                                                                                                                                                                                                                                          682 Gloslu FhrehelysArgVallen HelysGloslusfurgyrAspSer HelleValPhe 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            722 ProbroThrLeuSerProlleProHisIleProArgSerProTyrLysPheProSerSer 741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  802 AsparqVillentysArqSerAlaGlySerAsnProProtySProtzettysLysLeu 821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  842 LystheGlndluLysLeuAlaGluMetThrSerThrArgThrArgMetGlnLysGlnLys 861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       782 GlydluSerPhedlyThrSerGluLySPhedlnLysIleAsnGluMetValCysAsuSer
                                                                                                                                                                                                                                                                                                       2884 ATGAATGATAGGATAGGTCAAAGAAAGAAGAAGAAA 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             86.2 Met Ash Asp Ser Met Asp thr Ser Ash Lys Gludlutys 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Antelman, D., Gregory, R.J. and Wills, K.N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ΑNC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Retinoblastoma fusion polypeptides
Patent: US 6074850-A 3 13-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AR098189 2994 bp
Sequence 3 from patent US 6074850.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR098189 1 01:12807446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 2994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unclassitied.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR098189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Inknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           - KCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FULKNA1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KESSULL Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ARDSHIRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                      ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                5
                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                               -
                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                   \stackrel{>}{>}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
```

```
1084 AATCITICIAAACGAIACGAAGAAAITTAICITAAAAAIAAAGAIGTAGAGGAGGAGAITA 1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 242 PhelleProPheMetAsmSerLeuGlyLeuValThrSerAsmGlyLeuFrosluValGlu 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        262 AssLeuSerLysArgTyrGluGlulleTyrLeuLysAsnLysAspLeuAspAluAraleu 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        604 GATGTATTGTTTGCACTCTTCAGCAAATTGGAAAGGACATGTGAACTTATATATTTGAAA 663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  664 CAACCAGCAGTTCGATATCTACTCAAATACTCGCATTCTGCTGCTAAAACTTTCTTGC 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               124 AAGGAACTGTGGGGAATCTGTATCTTATTGCAGCTTGACCTAGATGTGGCTTC 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              544 AAAGAAATTGATACCAGTACCAAAGTTGATAATGGTATGTCAAGAGTGTTGAAGAAGTAT 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 102 AspValleuPheAlaLeuPheSerLysLeuGluArgThr@ysGluLeuHeTyrLeuThr 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122 GloBroSerSerSerIleSerThrGlaIleAanSerAlaLeuValLeuLysValSerTrp 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         162 PheGInLeuMetLeuCysValleuAspTyrPhelletysLeuSerProProMetLaulaen 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 282 PheteuasphisaspigsThrteuGhihraspserfleaspserPhediuthrdluarq 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         182 LysdluProTyrLycThrAlaVallleProlleAsudlySerProArgThrFroArgArg 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                202 GlyGlaAsnArqSerAlaArqIleAlaLysGlaLewSlaAsnAspThtArqIletleGlu 221
                                                                                                                                                                                                                                                                                                                                                                                    42 LysGluLeuTrpGlylleCysTlePhelleAlaAlaValAspLeuAspelluMetSerPhe 61
                                                                                                                                                                                                                                                                                                              22 LeuThrTrpGluLysValSerSerValAcpClyValLeuthFClyTyrIleCluLysLys 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                       62 ThrPheThrGluLeuGluLysAsnIleGluIleSerValHisLysPheFheAsnLeuLeu 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82 LysGlufleAspThrSerThrLysValAcpAcuAlaMetSerArqLesLeutysLyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          784 ITTCAGITAAIGCIAIGIGCCITGACIAITITAITAAACICICACCIOOAAGIGCIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    222 ValleadystysdieHisGludysAsnileAspolaValtysAssValtyrthatysAss
                                                                                                                                                                                                                                                                                                                                                                                                      5 5 5 5
                                                                                                                       Conservative:
Mismatches:
                                                                                                        Matches:
                                                                                                                                                         indels:
                                                                                      Length:
                                                                                                                                                                                                         US-09-026-459A-31 (1-874) x AR098189 (1 2994)
/organism-"unknowu"
                                                                                                                       100.00%
                                                                                                    4499.00
                  618 C
                                                                                                                                                         868.66
                                                                                                                     Percent Similarity.
Best Local Similarity:
                474 a
                                                                     Scores:
                                                                                                                                                        ; Ouery Match:
                                                                                  Pred. No.:
                BASE COUNT
                                                                   Aliqument
                                  ORIGIN
                                                                                                      Score:
                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DP
CP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
```

203 21 263 41 61 81 843	01 21 24 41 623 81	743 01 01 803 41 41 5923	L 4 L 0 L 9 L 7 L
	777779 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	TCGAAAGTTTT 1 TCGAAAGTTTT 1 TCGCSGLUBIS 5 GATGTGAACAT 1 GATGTGAACAT 1 TTATTAAACAA 1 TTATTAACAA 1 TTATTAACAA 1 TTATTAACAA 1 TTATTAACAA 1 TTATTAACAA 1	InalathrScrala 5 AASTAACTCASC 2 2 2 2 2 2 2 2 2
	0-0 >-0 H-0 ∢ -0	H-4 4-0 8-4 L-0	Lyschyscribribrargvalasnscribralassnaladluthre AAAGTTAACTACTATAATTCTACTGAAATGAAATCACACACA
1144 1204 1204 1264 1264 1324 1324 1384	482 1504 1504 422 1564 482 1654 482	1.844 1.44 1.44 1.804 1.804 1.864 1.924	1984 1985 2083 2044 602 2104 2164
2 6 2 5 2 5 2 5 2	5 8 5 8 5 8 5	8 8 8 8 8 8 8 8	5 6 5 6 6 6 6 6 5

```
FAT 20-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                2224 AGAGAMAGGMATHINGGAMMAARTTATGATGTTGGATGTATGGATATGGGATATGGAAGTGAAG
                                                                                                                                                                                                                                                                                                                                                            2764 GACCIGIGICA SANARARANING ISANGGANGCANCO INCOLARANG NA GACCANTINANA NA SANARANA NA SANARANA NA SANARANA NA
                                                                                                                                                         722 ProProThrLeuSerProIleProHisIleProArqSerProTyrLysPheProSerSer 741
                                                                                                                                                                                                                                                762 SerGluslyLeuProThrFroThrLysMetThrFroArqSerArglleLeuValserIle 781
                                                                                                                                                                                                                                                                                                                                      842 LysPheGlnGlnLysLeuAlaGluMetThrSerThrArgThrArgMetGlnLysU61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          History
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2884 ATGAATGATAGCATGGATACCTCAAAGAAGAAGAAA 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        862 MetAsnAspSerMetAspThrSerAsnLysGluGluLys 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 2994)
Antelman, D., Gredory, R.J. and Wills, K.N.
Retinoblastoma fusion proteins
Fatcht, 38 to 3/9527 A 3 NG AFF 2032;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N.O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             809 t.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 3 from patent US 6379927.
AR207831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"unknown"
618 c 593 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AR207831.1 GI:21507687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             190.00%
100.00%
99.89%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4499.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4/4 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JUGENAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AR207831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Siljori
                                                                                      d
                                                                                                            á
                                                                                                                                                                             qq
                                                                                                                                                                                                                          6
                                                                                                                                                                                                                                               ía.
                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                     HCI
                                                                  6
                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                      50
                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŏ
```

024 TELATAGGELITTAGGALLCTCTTGGACTLCTAATGGACTTCCAGAGGTTGAA 1083 1144 FTTTTGGAFGAGATATAAAAGTGTTCAGAGTGTTGTATAGAGAGAGTTTFGAAAGAGAGAGAGA 1203 1264 AGGACTGTTATGAACACTATCCAACAATTAATGATGATTTTAAATTCAGCAAGTGATCAA 1323 .084 AATCITICIDAAAGGAIACGAAGAAAITITAICITAAAAITAAAGAICIAGAIGCAAGAITA 1143 282 PhotecusphisAsplysthrLouglnthrAspSerlleAspSerPhoGluThrGlnArg 301 322 ArgThrValMetAshThrIleGlnGlnGcuMetMetIleGeuAshSerAlaSerAspGln 341 262 AsmirosortysArgtyrtholothellyrthoutysAsmiysAsptouAspAlaArgteu 281 944 AAAGAAATTGATACCAGTACCAAAGTTGATAATGCTATGTCAAGACTGTTGAAGAAGTAT 603 122 GluProSerSerSerIleSerThrGluIleAsnSerAlaLeuValLeuLysValSerTrp 141 484 ACTITIACHGAGCIACAGAAAAAACAIAGAAHCAGHGCGATAAAIIGTTIAAGITAGIA 543 82 LysolulleAsplhrSeribit.ysValAspAsnAlaMet.SerAigLeuLeuLysLysTyr 101 102 AspVallenPheAlaLenPheSerLySLenGluArgThrCysGluLenLleTyrLeuThr 121 142 The The Preference of Alanys GlyGluValleuGinMet GluAspAspleuVallleSer 161 182 LysdluProTyrLysThrAlaValII+ProII+ASuGlySerProArqThrProArqArq 201 202 OlyoluAsnArdSorAlaArqileAlatySCInLeaGluAsnAspThrArqileileGlu 221 864 TTAACITGGGAGAAAGITICGTGTGGATGGAGTATIGGGAGGIFATAITCAAAAGAAA 423 22 Jouthr ErpGlutysValSetSetValAspGlyValLeuGlyGlyTyr HeGlntystys 41 6.2 ThrPheThrGluLeuGlnLysAsnIleGluIleSerValHisLysPhePheAsnLeuLeu 81 2 AspPheThrAlaLeuCysulaLysLeuLysIleProAspHisValArqGluArqAlaTrp 21 15 09 026 459A 31 (1 B74) x AR207831 (1-2994) â 4 5 <u>.</u> 3 - ŝ ŝ 5 â 5 5 $\stackrel{\sim}{\sim}$ 5 5 5 = 75 <u>-</u> 5 2 5 Š 5 5

```
2284 AATATAGACCITAAAIICAAAAICAIIGIAACAGGAIACAAAGAICIIGTIGTI 2343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2344 CAGGAGACATTCAAACGTGTTTTGATCAAAGAGGAGTATGATTCTATTATAGTTC 2403
                                                                                                                                                                                                                                                                                                                                                  444 CAGGGTTGTGTGGAAATTGGATCACAGGGGTTGGAACTTGGAGTTCGCTTGTATTACCGA 1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      244 ATCAAAGCAGAAGTTGACAAGTTGACAAGAGAATTAAAAACATITAGAA-GATGTGAAGAT 1804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1804 CGAATCATGGAATCCCTTGCATGGCTCTCAGATTCACCTTTATTTGATCTTATTAAACAA 1863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2104 CGGCTAGCCTATCTCCGGCTAAATACACHHGIGAACGCCHTGGGCGGCGAGAACACCAGAA 2164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1324 CCTTCAGAAATCIGAFITICCTATTITAACAACTGAGIGAATCCAAAAGAAGATATA 1383
                                                                                                                                                                       1384 CTGAAAAGAGTGAAGGATATAGGATACATCTTTAAAGAGAAATTGCTAAAGTGTGGGGA 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -504 GTAATGGAATGCATGCTTAAATGAAAGAAGGATTATGGATTGAAATTTTAGGAAA 1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 :564 CTTCTGAATGACATTTTTCATATGTCTTTATTGGCSTGCGCTCTTGAAGTTGTAATG T62+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6.61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1924 CTCCAGAATAATCACACTGCAGCAGATATGTATCTITCTCCTGTAGATCTTCCAAAGAAA 1984
                                                                                                                                                                                                                                                             442 AlathriyrserArgSerTbrSerGinAshLeuAspSerGlythrAspLeuserPhePro 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    562 LysClyserThrThrArgValAsnSerThrAlamAladtuThrdtuAlathrSerAla 581 [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII] [HIII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    682 GInGlufftrPhetysArqValLeuTletysGluGluGluffyrAsp8erTletTevATPhe 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       702 TyrAsnSerValPheMetGlnArqLeuLysThrAsnIleLeuGlnTyrAluSerThrArq 721
                                                                                                                                                                                                                                                                                                                                                                                                                               402 ValMetGluserMetLeuLysserGlaGlaGlaArateuserileGlaAsnitesertys 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           422 LeuLeuAspAspIlePheHisMetSerLeuLeuAlaCysAlaLeuKluValValWat 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       602 ArgleuAlatyri euArgleenAshthrienCyethuArglen; enGasethuHierresthe 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             662 AsnileAspLeuLysPheLysIleileValThiAlaTyrLysAspLeuPreHisAlaVal 681
                                                                                          362 LeuLysArqValLysAspileGlyTyrilePhelysGluLysPheAlutysAlaValGly_{\gamma} 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        502 ArglleMetGluSerLeuAlafrpLeuSerAspSerProLeuPhoAspLouTH-1435GLn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          622 keuGluHisltelleTrpThrLeuphedluHisthrLeudluAsndluTyrdluLeumer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 642 ArgAspArqBisLeuAspGlalleMetMetCysSerMetTyrGlytDerysLysValLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              462 TrplleLeuAsnValLeuAsnLeulysAlaPheAspPheTyrLysValllesluSerPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     482 IleLysAlaGluGlyAsmLeuThrArqCluMetIleLysHisLeuCluAra/ysGluHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               522 SerLysAspArgGluGlyProThrAspHisLeuGluSerAlaCysProbeuAsubeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  542 LeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerProValAruSerProLysLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       582 PheGlaThrGlaLysProLeuLysSerThrSerLeuSerLeuPheTyrLysLysValTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ^{0}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     d
                                                                                              ŝ
                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                         뎚
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
```

```
i ov
                                                                                                                                                                                                                                                                                                          Q
D
                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ं
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \ddot{c}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ें
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lissue specific expression of retinoblastons protein
BD009728
                    DoffcLAS ANTELMAN, PTCHARD J GREGORY, KENNETH N WILLS PC
CCTH. 104 1-17 12 AVE GAGORY, KENNETH N WILLS PC
CC Strandedness: Single;
                                                                                                                                                                                                                                 2584 ICAGAAGGICTGCCAACACAACAAAAATGACTCCAAGATCAAGAATCTTAGIATCAATT 2643
                                                                                                                                                                                                                                                                                                        2824 AAATIICAGCAGAAACTGGCAGAAAIGACTTCTACTCGAACAGGAATGCAAAAGCAGAAA 2883
                                                                                                                                        76.2 SerGluGlyLeuProThrProThrLysMetThrProArgSerArglleLeuValSerIle 781
                                                                                                                                                                                                                                                                                                                                                         822 ArgPhcAspileGluGlySerAspGluAlaAspGlySerLysHisLeuProGlyGluSer 841
722 ProProThrLeuSerProIleProHisIleProArgSerProTyrLysPheProSerSer 741
                                                                       742 ProLeuArgIleProGlyGlyAsnIleTyrIleSerProLeuLysSerProTyrLysIle 761
                                                                                                                                                                                                              782 GlyGluSerPheGlyThrSerGluLySPheGlnLysIleAsnGloMetValCysAsnSer 801
                                                                                                                                                                                                                                                                                       ROZ ASPARGVALLEULYSARGSERALGGLYSERASNPROPROLYSPROLEULYSLEU 821
                                                                                                                                                                                                                                                                                                                                                                                                                                842 LysPheGlnGlnLysLeuAlaGluMetThrSerThrArqThrArqMetGlnLysGlnLys 861
                                                                                        1 (bases 1 to 2994)
Archiman D. Grapory, I and Wills K N
Tissue specific expression of retinoblastoma protein
Patent: JP 200150358 A 2 21:MAR-2901;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13-NOV-1997 UP 1998522958
15-NOV-19946 US 09-2751517 (14-PPR-1997 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism-'Unidentified'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2884 ATGAATGATAGCATGGATACCTCAAACAAGGAAGAAAA 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     852 MetAsnAspSerMetAspThrSerAsnLysGluGluLys 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Oualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     803 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism-"unidentified"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local ion/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BD009728.1 G1:18638101
UP 2001503638-A/2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unidentified
JP 2001503638-A/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            lopology: Linear;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4499.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. . 2994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unidentitied
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        unclassitied
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CANJI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   974 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOLICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      - ROANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 4
R0009728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SCHE'E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FIURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSUN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              - MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    XI::IX
                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
```

808.66

Unery Match:

```
1084 AATCTTTCTAAACGATACGAAGAAATTTATCTTAAAAATAAAGATCTAGATGCAAGATA 1143
                                                                                                                                           242 Pholich of wetash Serboud group in SerAshGighen Proclavators 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          282 PheLeuAspHisAspLysThrLeuGluThrAspSerIleAspSerPheGluThrGlnArg 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           302 ThrProArgLysSerAsmLeuAspGluGluValAsmVallleProFroHisThrProVal 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            342 ProSerGluAsnLewIleSerTyrPheAssASnCysThrValAsaFroLysGluSerIle 361
                                                          122 CinProSerSerileSerThrCluIleAsnSerAlaLeuValLeuLysValSerIrp 141
                                                                                                                                                                                                                                                                                                                                                                                                          664 CAACCCAGCAGTICGATATCTACTGAAATAAATTCTGCATTGGTGCTAAAAAGTTTCTTGG 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                162 PheGlnLeuMetLeuGysValleuAspTyrPhelleLysLeuSerProProMetLeuLeu 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                202 GPC rashargSeral rangilleAlaLysSinicuSluAshAspEbrargHeHcSin 221
                           62 ThrPheThrCluteuGlnLysAsnIleGluIleSerValHisLysPhePheAsnLeuLeu 81
                                                                                                                                                                                                                                                                                                                     102 AspValLeuFheAlaLouFheSerLysLeuGlu\DeltaraThiC_{\gamma}sGluLeuIleIyrLeuThr
                                                                                                                                                                                                                                                               82 lysClullcAspThrScrThrlysValAspAshAlaMetSetAtgLeuLeulysLysTyr
US-09-026-459A-31 (1-874) x HD009728 (1-2994)
```

<u> </u>	424	→	
7.5	1484	~ -+	
40 40	382 1444	4	
5 G	402	4 -	
5 g	422		
5 3	442	4 ~	
60 G	46.2	4 ~	
	482	- €	
5 3	502	- C	
5 3	522	SertigsAspArgiladiyFroThrAspilisLeuGlaSerAlaCysProJeuAsnLeuPro 541 	
5 6	542	FORGINAS NASARIAS TREADED BASE PROTECTED OF A PARTICULAR SECTION SELVENCES SELECTOR OF A PARTICULAR SELVENCES SELECTOR OF A PARTICULAR SELVENCES AND A PARTI	
<u> </u>	56.2	Lycalysecthribratovalasosecthralaasnalagluthrolnalatbrsecala 581 	
5 g	582	PhysinThrolatysBrstontysSerThreerLeaseLeaFbeTyrLysValTyr (f) 	
55 E	502 2104	Ardizablatytizabrdizabadhrizabysgibarqizabrardibhsergibhistrodia 621 	
S ±	5.22 2164	LevisludistlettetrpthrLeviphedindisthrLevidinAsidstryfdluLeviMet 641 	
5 3	642	Argaspargfisteuaspolotlemermetcyssermettyrotytlecystysvallys 66 	
5 3	562 2284	ASCHICASPLACHYSPECTYSTICTICVATThrAlatythysAsplachroHisalaVal 681 PELHELLELLITETTETTETTETTETTATAACAGCATACAAGGATCTTCCTCATGCTGTT 2343	
5 £	682	GlaciuthrehetysArqValLeutletysGluciudiutyrAspseriletleValPhe 701 	
S	707	Tyrasuservalphewerothadroteou ysthrasnileteothuryalaserthrarg 721	

```
PAT 10-JUN 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Shopard, H.Wichael, and Wen, S.Fen.
Characterization of a novel anti-pl10.sup.RH monoclonal antibody
Putent, US 5215555 A 2 20-JAN-1998;
Location/Onaliliers
                                                                                                                                                                                                                                                                                                                                                                                                                            2404 TATAACTCGGTCTTCATGCAGAGTGAAAACAAATALIIGCAGIAIGCIICCACCAGG 2463
                                                                                            HITTER HITTER HITTER HITTER HITTER HITTER HITTER HITTER AND A CONCURACION OF CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTROL OF A CONTRO
                                                                                                                                                                                                                                                                                                                                                                   802 AspArqValLeuLysArqSerAladludlySerAsnProProLysProLouLysLysLeu 821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               842 LyspheGlnGlnLysLeuAlaGluMetThrSerThrArgThrArgMetGlnLysGlnLys 861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  822 ArqPheAspileCluClySerAspGluAlaAspGlySerLySHisLearroGlyGluSer 841
                                                            722 ProproThrLeuSerProlleProHislleProArqSerProTytLysPheProSerSer 741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 AspPheThrAlaLeuCysClnLysLeuLyslleProAspRisValArdCluArdAlaErp 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42 LysGluLeuTrpGlylleCysllePhell+AlaAlaValAspLeuAspGluMetSerPhe 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2334
873
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2884 ATGAATGAFAGGATGGATAGGTGAAGGAAGGAAGAAA 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      862 MetAsnAspSerMetAspThrSerAsnLysGluGluLys 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N'S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2 from patent US 5718255.
181465
181465.1 GI:3209762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lengt h:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-026-459A-31 (1-874) x 181465 (1-2994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /ordanism="unknown"
1 618 c 591 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 2994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4499.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99.868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unclassitied.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               974 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         I81465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                         Οy
                                                                                                                      q
                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                      οy
                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         òχ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                   ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
```

THE FILLIHITH HITTITITITITITITITITITITITITITITIT	BETHIGHTHITHITHITHITHITHITHITHITHITHITHITHITHI	TYGACCYAGATGAGAYGYGGTYC 4 THISLYSPHEAPANLEULEU 8 THISLYSPHEAPANLEULEU 8 THISTHISTHISTHISTHISTHISTHISTHISTHISTHIS	616 616 767 A16	alleuLysValSerTrp 14	spAspLcuValileSer 1 [erProProMetLeubeu 18 [[[[]]]]]]]] [GACCICCCATGTTGCTC 84	roargiirficargarg 20 	rg1 	rrbetrsasn 24 	rogluvalglu 26 GGAGGTTGAA 10	spalaargieu 28 atgcaagatta 11	luthrcinarg 30 	isThrProVal 32 	laSetAspGln 341 	yscluserile 36 AAGAAGTATA 13	GGULYSPBeAlaLysAlavalGly 381 	cufyrfyrArg 40 GTAlfAccGA 15	euSertleClnAsnPheSertys 421
	4	STOTTHEFTER TOTTHE THE TREADED WAS TOTTED TO THE STATE OF	10 10 45 45 45 45 45 45 45 4	InProserSerSerIles	lelhrbelæuceualat 	nLeuMetLeuCysV JIIIIIIIIIII GIIAATGGMATGT	akratyrlysthri Flillillilli Accatataaaacac	CLYCLBASDAFGSCFALDAFG LCALDLYSCIDLCC + - - - - - - - - - - - - -	VATECHYRLYSCIUHTSCIUCYSASHTICASPCIU 	PhelleproPheMetAsnSerLeuclyLeuValThz 	Asid context (38 A ratherstanded the fight course the first till till till till till till till ti	Pheteriasphisaspiysthri.cuClnthraspSer 	ThrProArdLysSerAsnLeuAspoluGluValAsn 	g thryatmecksorthriteGindInteumetmet File FILE	Skir Oldasnica HeserfyrtheAsnashCys 	aalysaraVallysAspilesiy;TyrileBbcLyr ELLELLELLELLELLELLELLELLELLE EGAAAGAGTGAAGGAFAFAGGAFACATCTFTAAA	notycysvalgiullediysordinargfyrtyk HTTLLHHHHHHHHHHHHHHHHHHH voottotaaattsvatov voogaladaa	alMet@luSerMetLeuLysSerGluGluGluArd

```
7163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  502 ArgileMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeuTleLyscln 521
1804 CSAATFALGAARCOTTG-ALGSCTCTCAGAITCACCITATTGAICTTAITAAACAA 1863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1924 CTCCAGAATAATCACACIGCAGCAGATAIGIATCITICICCIGTAAGAICICCAAAGAAA 1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2284 AATATAGACCTTAAATTCAAATCATGIAAAGGAIACAAGGAICTTCCTCAIGCTGTT 2343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2344 CAGGAGACATITAAAAGGTGTTTTGAICAAAGAAGGAGIAIGAIGGAITGTAIIAIAGIATTG 2403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2524 COCTTACGGATTCCTGGGGGGAAGATCTAIAITIGACGGGGGAAGAGAGAGAGAATT 2583
1504 GTAATGGAATGCATGCTTAAATCAGAAGAAGGATTAIGCATTCAAAATTTAGGAAA 156
                                                                                                                                                                                               IrplleLeuAsnValleuAsnLeuLysAlaPheAspPheT,rLysVallleGluSerPhe 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             582 PheGlaThrGlaLysProLeuLysSerThrSerLeuSerLeuPheTyrLysLysValTyr 601
                                       422 LeuLeuAsnAspAsnIlePheHisMetSerLeuLeuAlaCysAlaLeuGluValValMet 441
                                                                                                                    442 AlaThrTyrSerArgSerThrSerClnAsnLcuAspSerClyThrAspLauSerPhePro 461
                                                                                                                                                                                                                                                                               IleLysAlaGluGlyAseLeuThrArqGlaMetIleLysHisLeuGlaArqCysGluHis 501
                                                                                                                                                                                                                                                                                                                                                                                                                                         522 SerLysAspArqGluGlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuPro 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      542 LeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerFroValArqSerFroLysLys 561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            602 ArqLeuAlaTyrLeuArgLeuAsnThrLeuCysGluArqLeuLeuSerGluHisProGlu 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       622 LeuGluHisllefleTrpThrLeuPheGlnHisThrLeuGlnAsnGluTyrGluLeuMet 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               682 GinGlambrehetgsArgVallculletgsGluGlaGlamgrAspScritcileValPhe 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          702 TyrAsaSerValPheMetGlaArgLeuLysThrAsmileLeuGlaTyrAluSerThrArg 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     722 Proprofibria-SarbreileProfilsHeBreArgSerFroTyrLysPheBreSerSer 741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    762 SerGludlyLeuProThrEysMetThrFroArqSerArglleLeuValSerlle 781
                                                                                                                                                                                                                           1744 AICAAAGCNGAAGGAACTTGACAAGAAAATGATAAAACAITIAGAAGGATGIGAAGAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  562 LysGlySerThribrargValAsnSerThralaAsnAlaGluThrGlnAlathrSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2134 GGGTANGTAN DEGGGGGGTAAAATA WATTI SIGAA GGCTLOIGIGIGAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2464 CCCCCTACCTTGTGACAAAAATTCACATCCTGGAAGCCCTAGAAGTLICCTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         662 AsolleAspLeuLysPheLyslelleValThrAlaTyrLysAspLeuProHisAlaVal
                                                                                                                                                                                                  7.5
                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                  급
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  οÿ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
```

```
RVLI KEEENISTI VEYNSVEMQMERINTT QYASTIPIDTI SPIPHTIPISPYKEPSSPIR
I POONTY I SPLKSPYKI SENI PTPTKMTPBSPTI VSI OFSPATSEKPOKINGMYONSD
RVI KPSAFOSNPPKEI KKI PFDI ESSDFAPOSKIIT POPSKFQQKI ABMISTPTPMQYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear PRI 12-JUL-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ML/VI OYFTRI SPPMITREPYKTAVIPIN/SSP/TPRP/S-NPSARIAKQLENDTRITEV
L/YEFP/VILIFYKNVYFKNETE-FANSIGLVEN SP-TIPEVEN, SKRYBELFYKKEDIJAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LETAHDKTAGTOSTOSE ETOKLERKSNIDEEVNVEPPHTPPRKTVMNTTOOLMMITINSA
SOGPSENLTSYENNYTEVIPKESTTEKEVKATOYTEKEREARAVSGGCVETOSOKRADOY
RLYYRVMESMLKSEEERLSTONFSKLLNONTFHMSLLACALEVVMATYSKSTSONLDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTDLSFPWII NVI NI KAPDFYRVI PSFI KAFONLTPEMI PIILEPOEIIRIMESLAWLSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SPLFDLIKUSKIPESPTDHLESAPPLNLPLQNNHTAADMYLSPVRSPKKKGSTTRVNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TANAELOATSAEGLOKPLKSTSLEYKKVYRLAYLKLNTLCERLLSEHPELEHT IWT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LEGHTLONEY ELMKORHLDOTMMCSMYGTCKVKNTOLKEKTTVTAYKDLPHAVQETEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lee, W.H., Shew, J.Y., Hong, F.D., Sery, T.W., Donoso, L.A., Young, L.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bukaryota: Metazou: Chordata; Crapiata; Veriebrata; Buteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human retinoblastoma susceptibility protein mkNA, complete cds.
M28419
                                                                                                                                                                                                                                                                                             2704 hACCHUGGIE AAAAGAAGGIGAAGGAAGAAGGAAGGIGGFAAAGGAGIGAAAAAAGTA 2763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2764 OBCITTGATALIGAAGGALOAGATGAAGGAAGGAAGTAAAGALOTOOOAGGAGGGCC 2823
                                                                                                                                                                                        902 ASPATAVILGOGGGAR (2014) 2013 2014 ASPAGAR (2015) 2014 ASPAGAR (2015) 2014 ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASPAGAR (2015) ASP
                                                                                                                                                                                                                                                                                                                                                                                            842 LysPheGlaGlaLysLeuAlaGluMetThrSerThrArqThrArqMetGlaLysGlaLys 861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              retinoblastoma profein; retinoblastoma susceptibility protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /map="xp22.42;ypll.4"
/ceil_fine "retinoblastoma cell line Y79, and normal
782 GlychuserPhedlyThrSerGluLysPheGlnLysTleAsnGlnMetValCysAsnSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Horistein, K., and Lee, E.Y.

The relinoblastoma susceptibility gene encodes a nuclear phosphoprorein associated with DNA binding activity MAINTER 29 (6140), 642-645 (1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note-"retinoblastoma suceptibility protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             862 Met AsuAspSerMet AspThrSerAsuLysGluGluLys 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo Sapiens retinoblastoma conA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue type-"retinoblastoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db xref:"GDB:G00-120-184"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           retinoblastoma cell iine"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zprotein_id="AAAA6808_1"
Zdb_xret="G1:190963"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /orqanism "Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2994 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Atb_xrel "taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /codon_start-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "2" MIC2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZOIM. - OHOD/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 2994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . 7,17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    M28419.1 01:190962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  71,1,7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HUMRBSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             South Cer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KELEKENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOHNNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
HUMRESA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FLATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
```

5

```
1084 AATCTTTCTAAACGATACGAAAATTTATCTTAAAAATAAAAATGTAGATGGAAGATTA 1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1144 TTTTGGATGATGATAAAAGGTCTCAGACTGATCTATAGACAGTTTTGAAACAGAAAAA 1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82 LysGluTleAspThrSerThrLysValAspAsuAlaMetSerArgLeubenhysLysTyr 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      102 AspvalleupheAlaleupheSerLysleuGluArqThrCysGluLeuTleTyrLeuThr 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        122 GluProSerSer1LeSerThrGlu11eAsnSerAlaLeuValLeuLysValSerTrp 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           724 ATCACATITITALITACIAAAGGGGAAGIALIACAAAIGGAAGA GALCIGGIGAII ICA 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              262 AssLeuSerLysArqTyrGluGluIleTyrLeuLysAsalysAsalysAsplanAqAluAnqian 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      282 PheteuAspHisAspLysThrLeuGhrThrAspSerlleAspSerPhedluthrGlnArq 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   162 PheGlidzeuMetLeuCysValleuAspTyrPhelleLysLeuSerProProMetLeuLeu 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          182 LysGluProTyrLysThrAlaVal HePro HeAsinClySerThoArdThrProArdArd 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               202 GlygleAsnArqSerAlaArqIleAlaLysGluLauGluAsnAsyThiArqIleIladlu 221
                                                                                                                                                                                                                                                                                                     42 LysGluLeuTrpGlyllefysflePhelleAlaAlaValAspl&uAspGluMetSerPhe 61
                                                                                                                                                                                                                                                                                                                                                           62 ThrPheThrGluLeuGlnLysAsnlleGlulleSerValHisLysPhePheAsnLeuLeu 81
                                                                                                                                                                                         2 AspPheThrAlaLeuCyschinysLeuLysTleProAspHisValArdCluArdAlaTrp 21
                                                                                              Conservative:
Mismatches:
             809 1
                                                                                 Matches:
                                                                                                                          Indels:
                                                                     Length:
                                                                                                                                                               US-09-026-459A-31 (1-874) x HUMRBSA (1-2994)
             594 0
KMNDSMDTSNKEEK"
                                                                               4499.00
100.00%
                                                                                                           100.00%
              618 C
                                                                                                                        868.66
                                                                                                           Best Local Similarity:
             974 a
                                                                                            Percent Similarity:
                                                     Aliqument Scores:
                                                                                                                      Query Match:
                                                                   Fred. No.:
              BASE COUNT
                           ORIGIN
                                                                                 Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ē
                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             역
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
```

```
linear PAT 02 DEC-1994
                                                                                                                                            2644 GGTGAATCATTGGGGACTTCTGAGAAGTTCCAGAAAIAAAICAGATGGTATGIAACAGG 2703
                                                                                                                                                                                                                                                                                                                                                                                                           702 TyrhsenSerValPheMetGlnArqLeuLysThrAsmIleLeuGlnTyrhlaSerThrArg 721
                                                                                                                                                                                                                                                                                              802 AspargValLouLysArgSerAlaGluGlySerAsoProProLysFroLouLysLysLeu 821
                                                682 GlnGluThrPheLysArqValLeuIleLysGluGluGluTyrAspSerIleIleValPhe 701
                                                                                                                                                                                                                                                762 SerGluGlyLeuProThrProThrLysMeUThrProArqSerArqlleLeuValSerIle 781
                                                                                                                                                                                                                                                                                                                                                                                               822 ArgPheAcplleGluGlySerAspGluAlaAspGlySerLyGHisLeuProGlyGluSer 841
662 AshilcAsploutysPhetysIleTleValThrAlaTyrtysAsplouProHisAlaVal 581
                                                          873
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dryja.T.P. and Friend.S.

Human DNA in the diagnosis of retinoblastoma
Fateril. EF 255531 A. 1.39-MAR-1988;

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2884 AYCAATGGGATGGATAGCTGAAGAAGAAGAAAA 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             862 MetAsnAspSerMetAspThrSerAsnLysGluGluLys 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
Conscryative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1 from Patent DP 0259031.
105311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-026-459A-31 (1-874) x 105311 (1-4597)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism-"unknown"
842 c 812 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4499.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         105311.1 G1:591083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99.898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .4597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1489 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NULLINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESS ION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 7
I05311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
                                                                                                                      qq
                                                                                                                                                                                                                                                                                               9.7
                                                                                                                                                                                                                                                                                                                                                                                               ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                              δÿ
```

3 2	7	AspenethralaneoryschusysteatystheproasplisValargalaargalatre
5 £	22	Desthringstration of the Control of
5 3	4.2	Lyschuleufrpchytte/ystleebelleAlaAlaValAspicuAspiluMetScrebe 61 HTTLLHTHLHTHLHTHLHHHHHHHHHHHHHHHHHHHHH
5 g	146	The EncThe Glades of Integral Legical Legical History Scheepe Asnieur Blanch in the History History EncY and Ada Ada Ada Ada Cache Canada Anticologia
5 3	8.2 406	LyschulleaspthrsorthrLysvalaspasdalamotserarglougougsLysTyr 101
45 45 45	102	ASPVATROUPHOALALOUPROSOCLYSTROUGHOATGTBETÇYSGTULOUTELYTLOUTER 121 (THITTHTHTHTHTHTHTHTHTHTHTHTHTHTHTHTHTHT
5 3 5 3	122	<pre>GIRProSerSerTleSerThrGluIleAsnSerAlaLeuValLeuLysValSerTrp 141 FIFITHTETTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT</pre>
5 3 5	14.2	Head to the Levile and a Lysely selves level newer clause paspize use Lead
45	16.2	PhysinicumetruncysvalicussplyrbbelletyslenserProfrometlenicu 181
5 3	182 706	LysclubrotyrLysThrAlaVallleProfleAsnGlySerProArdThrProArqArg 201 FELLICE
\$ <u>\$</u>	202	Glynlinksrafreseraloargilealoryskilnieokionasnaspihrargileilesin 221
45 45	222 826	Valtoudystyschulischudysasiiloaspchuvaliysasiivatiyrehetysasii 24)
45 G	242	Pherthepropraemer Asisserte-solyte-uValthrserasid)yteseprostsuValgiu 261
A 2 3	262 946	AcidacusertysArgTyrclactatteTyrLosLysAsilysAspLecaspAlaArgLei 201
\$ 4	282	Phetonasphisasptysibricoglidhaspscrileaspscribedlidhrdinarg 301
3 A	402 1066	Thr ProAndLys SerAshilzedAsp/BluGluValAshValHTeProProHisThrProVal 321
5 ±	422 1126	ArqThrValMetAshThrIleGlnGlnLeuMetMetIleLeuAshSerAlaSerAspGln 341
7.7 T.P	142 1186	ProSerGibasbirolLeSerTyrPheAsbAsbCysThrValAsbProtysCibSerTie 361

```
1725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HILLEFFEET HELLEFFEET THE FEET AAAAGCCTT IGATITITACAAAAG ISATICAAAAAG ISTT 1605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2146 - AATATAGACCTTAAATTCAAAATCAATGAACAGACACAGAGACTTCTTCTCTCAGCTGTT - 2205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2266 TATAACTOGOTOT IOAT OCAGAGACTOAAACAAATTI TTGCAGTATOTT FORMOADA 2325
                                                                                                                                                                                                  1426 CTTCTGAATGACAATTTTTCATATGTCTTTALLGGGGGGGGTCTTGAGGTGAALG 1485
                                                                                                                                                                                                                                                                                                                                                            175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            £8.1
                                                                                                                                                                        LeuLeuAsnAspAsmilePheHisMetSerLeuLeuAlarysAlaLeusluValValMet 441
                                                                                                                                                                                                                               442 AlaThrTyrSerArgSerThrSerGluAsnLeuAspSerGlyThrAspLeuSerPhePro 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       602 ArqLeuAlaTyrLeuArqLeuAsnThrLeuCysGluArdLeuLeuSerGluHisProGlu 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    642 ArgasparqhisLeuAspGln1leMetMetCysSerMetTyrGly11eCysLysValLys 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GinGluThrPhetysArqValleutletysGluGluGluHyrAspSertlelleValPhe 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       702 TyrAsnSerValPheMetGlnArqLeuLyslhrAsulleLeuGluTyrAldSerlhrArq 721
                                                                                                                  ValMetCluSerMetLeuLysSerGluGluGluArgLeuSerlleGluAsnPheSerLys 421
                                                                                                                                                                                                                                                                                                                                                                                                                 1666 CGAATCATGGAATCCCTTGCATGCACACATTACTTTATTTGATCTAAACAA
                                                                                                                                                                                                                                                                                    462 Trp11eLeuAsnValLeuAsnLeuLysAlaPheAspPheTyrLysValTLeMInSerPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SerlysAspArgCluGlyProThrAspHisLeuGluSerAlaCysProLeuAshLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    482 lleLysAlaGluGlyAsnLeuThrArqGluMetIleLysHisLeuGluArqCysGluHis
                                                                                                                                                                                                                                                                                                                                                                                                  502 ArgileMetGluSerLeuAlaTrpLeuSerAspSerProLeuPleAspLeuileLysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                542 LeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerProValArqSerFroLysLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         562 TysellyserThrThrArqValAsnSerThrAlaAsnAlaGluthreInAla1hrSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         662 AsnIleAspLeuLysPheLysIleIleValThrAlaTyiLysAspLeuFroHisAlaVal
                                                                                                                  402
                                                                                                   οδ
••
                             q
                                                           ć
                                                                                                                                           å
                                                                                                                                                                        ŝ
                                                                                                                                                                                                 9
                                                                                                                                                                                                                               ć
                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                      <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                             덤
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ĉ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \Xi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
```

722 ProProThrLeuSerProIleProHisIleProArqSerProTyrLysPheProSerSer 741

ĉ

```
Human retinoblastoma associated (RHI) mRNA, complete eds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota: Metazoa: Chordata: Cramiata, Vertebrata, Euteleostomi;
Mammalia: Putheria: Primates: Catarrhini: Homisidae: Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Praft entry and computer readable copy of sequence for [1] kindly provided by S H Friend. 10-FFR-1988
                                                                                                                                                   742 Protectarylletroclystytasattetyrileserrolestysserrolyttysile 761 ·
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 4600)
Friend,S.H., Horowitz,J.M., Gerber,M.R., Wanq,X.F., Bogenmann,E.
[1,F.P. and Weinberg,R.A.
2326 COCCETACITISTICACANTACCICACATICPORANGO OTTAGAMATOTO TASTONA 2385
                                                                                                                                                                                                                                                   2386 PPOTTAPPSATEPPTSANASANAATTIATATTTPAPPPTSAASAASAPPTATAAAAATT 2445
                                                                                                                                                                                                                                                                                                                                                                                                 25.26 POCITEGALATT GAAĞĞAİÇAĞA FÇAAŞÇAĞATGGAAĞTAAACATCITCCCAGGAGGICC 2585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2586 AAATTIGAGCAGAAACTGGCAGAGATGACTTCTACTCGAACGAAGGAAAAAGGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      822 ArgPbeAspIleGluGlySerAspGluAlaAspGlySerLysHisLeuProGlyGluSer 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Deletions of a DNA sequence in retinablastamas and mescambhyma:
tumors: organization of the sequence and its encoded protein
From Natl. Acad. Sci. U.S.A. 84 (24), 9059-9063 (1987)
                                                                                                                                                                                                                                                                                                                                              742 SergladlyLeaFroThrFroThillySMetThiProArqSerArglleLeaValSerIle 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               782 GlydlusorPhodlyThrsordluLysPhoGlnLysIloAssGlnMetValCysAsnSer 801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       842 Tysebs Collegesca. Alact MacThe Sea The Arganet Shelpschatys 861 (1911) | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                802. AspAraVall.cul.ysAnyScnAladlaGlyScnAsnProProLysProluciysOpsled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zhote "retinoblastoma assoviated protoio"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      862 MetAsnAspSerMetAspThrSerAsnLysCluCluLys 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      retinoblastoma protein.
Homo sapiens (clone: p4.7R) cDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xret="G1:190946"
/db_xret="G38.G0C-118-234"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /codon_start:1
/protejn_id="AAAh=4806_1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"/db xrel="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /cell_type-"retinoblast"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /map-"l4q14.2'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /dene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GI:190945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .4600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   M33647.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             From Nat
88097427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44 HO5 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RCANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            H :MRHA : KA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEFERENTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDI INE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>7</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SHECK
                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
```

LESKLERTYELTYLTUPSSSTSTETINSALVLKVSWITFILAKGEVLÖMBDDLVISFQL. MLOVLDYFIKLSPPMLLKEPYKTAVIPINGSPPTPRRGURSAFIAKQLENDTRIIEV

```
TEITHIPKTLGTDSTETTETTERCHLDEEVNVIPPHHFV9TVMTTLQUMMILNSA
SDQPSENIJSTENNCTVNPKESTIJRKVKDIGVIFNENEAAAVQQGGVETGSQRYKLGV
                                                                      KLYY KVMESMEK SEEERESTONFSYLLKON FEMSLEAGALLAVVMALYSKRISONLOS
GTDESFOWTENVENERAFORYKVIESE IKABONLI POMEKHLEPOHRIMESLAWESD
SPELTOLTYGSKORF OPTUHLESA PLIMEPELMNITAAF MYL (PVESEEERIE) ITBVK.
                                                                                                                                                                      LEQHT LÖNEYELMKDRHLLAJIMMCSMYGI CKVKNI DLKFRI I VTAYKDLPHAVQETEK
RVL I KEEEYDS I I VEYNSVEMQRI K"NI I QYASTRPPPI SPI 1941 PRSPYKEPSSPI R
                                                                                                                                                                                                                    IPOGNIYISPIKKSPYKISEGLPTPIKMTPRSRILVSIGESEGISEKEÖKINOMVCNSD
RVIKRSAEGSNPPKPIKKIRFDIEGSPEADGSKHIPGESKEPGEKLAEMISTRIEMGKO
KMNDSMDTSNKEEK"
LCKFHECHIDEVKNVYFKNFIPFMNSIGI VISNGI,PFVFNI SKPYEEIYLENKIYLDAR
                                                                                                                                              TANAETQATSAFQTQKPLKSTSLSLFYKKYYRLAYLRLNTLGERLLSEHPELEHIIWT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       82 LysGlulleAspThrSerThrLyaValAspAsnAlaMetSerArqLeuLeuLysLysTyr 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            202 GlyGlmAsnArgSerAlaArgIleAlaLysGlmLewGluAsnAspThrArgIleIleGlu 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  162 PheClnLcuMctLcuCfsVall.cuAspTgTPfbc1fc7ysLcuSorPtOFtoMctfaction 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22 LeuThrTrpGluLysValSerSerValAspGlyValLeuGlyGlyTyilleGluLysLys 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               182 LycdlaProTyrLysThrAlaValIleProIleAsmalySerProArqThrProArqArq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          222 VallesCystysGladisClaCysAsmilcAspClaValtysAsmValtytiktigsAsm.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 AspPheThrAlaLeuCysGlnLysLeuLysIleProAspHisValArqGluArqAlaIrp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              289 AAGGAAATTGTGGGGAAATGTGTATGTTATTGGAGGAGGTTGAGGTAGATGAGATGTGGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62 ThreherhreluLeuGlnLysAsnIleGluIleSerValHisLysPhePheAsnLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              469 GAIGTAITGITIGGACTOTICAGGAAATIGGAAAGAGAGAGAAGITGAAGITATATATATGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       829 GTTCTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAAAIGTTTTTTCAAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               182 AspValueurheAlanearheSertgsLeuGlaArgThrCysGluneufleTyrtleuThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             142 IleThrPhcLeuLeuAlaLysGlyGluValLeuGlmMetGluAspAspLeuValIleSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              649 TITCAGITAATGCTATGTCTCTTGACIATITIATIAAACICICACCICCCALGITGCIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                             815 g 1454 t.
                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                  Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ndels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09 026 459A-31 (1 874) x HUMRBAIRA (1-4600)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4499.00
                                                                                                                                                                                                                                                                                                                                                                                                                                              100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.00%
                                                                                                                                                                                                                                                                                                842 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  868.66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                                                                                                                1489 a
                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.:
                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ô
```

HITTITITITITITITITITITITITITITITITITITI	24. Phot to the broke Assistant will prove the set Assisty properties the March Transform to the Third the Third Transform Assistant Transform Tra	ochuvaldia 261 	palaargizeu 281 	fhrGlnArg 301 	hrProVal 321 VTCCAGIT 1128	SerAspGlu 341 11111111 AGTGATCAA 1188	luserile 361 	AlavalGly 381 	77.T7.TAF9 401 	PheserLys 421 	ValMct 4 11 1 GIAATG	.eserPhePro 461 	eGluserPhe 481 	ysGluHis 501 GGGAACAT 1668		uAsaLeuPro 541 TAAPCTTCCT 1788	27.01.yst.ys 561 		
- X-6 X-6 X-6 X-6 X-6 CAN A-6 X-6 N X-6 N X-6 X-6 X-6 X-6 X-6 X-6 X-1 X-0 X-0 X-0 X-0 X-0 X-0 X-0 X-0 X-0 X-0	Photocology Asistensis Asistensis Hillilli Hilli egippegvalbrSerasndlytesPr 	83 stretyrzeużyckońcyskapiseuks 71 i i i i i i i i i i i i i i i i i i i	LeAspSerE ATAGACAGTI	V4 FFF	nLeuMetMetIleLeuAsnSerAla TITILITITITITITITI AITAALGATGATTTTAAATTCAGCA	SerIyrP OCIAII	01.71 	«NyserolinaraTyrtysteuolyv. IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	tharqteaserthedlaasn 		PFGTBASGLEGASPSHETYTHASF HTTHHTHHTHHTHTHT CTCAGAATCTTGAFTCTGGAACAGAT	LeuLysAlaPheAspPheTyrLysValIl - - - - - - - - - - - -	sniesthrafgelsmet Helyshisleughbarge FELETTILLEFELTHETTILLET Vettgagaagagaaatgataaaagattagaagga	euAlaTrpLeuSerAspSerProLeuPheAspLeu - - - - - - - - - - - - - - - - - -	lybroThrAspHistouGluserAlacysProbou - - - - - - - - -	brataaspMettyrteuserprovataraser. HTTLLLLLLLLLLLLLLLLLLLLLLLLLLLLLLLLLLL	reth TIAC	TTP:	

```
Yound, P.E., Audustus, M., Carter, K.C., Ebner, K., Endress, G.,
Horrigan, S., S.ppel, D.R. and Weater, Z.
Cancer gene determination and therapeutic screening using signature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear PAT 09-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryola; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FELLITELLE FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLE
                                                                                                                                                                                                                                         THEFTER THE TELEFORM OF THE TELEFORM OF THE TELEFORM OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME OF THE SAME O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2269 TATAACTCGGTCTTCATCCAGAGACTGAAAACAAATATTTGCAGTATGCTTCCACTAGG 2328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2629 CONTINGATATICAAAGGATCAGATSAAGCAGATGGAAGTAAACATOTCCCAGGAGAGTCC 2688
                                                             1969 COGCTAGCCTATCTCCOGCTAAATACACTTTGTGAACGCCTTTGTGAGGGGAGGAGAAAA ZOZB
                                                                                                                                                                                                                                                                                                                                                                                                                     642 ArgasparghistouaspClutloMctMctCysScrMctTyrGlytloCystysVallgs 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      682 GlnGluThrPheLysAraValLeutleLysGluGluGluTyrAspSerflefleValPhe 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   742 ProLeuArgileProflyGlyAssileTyrileSerFrokeubysSerFroTyrLysile 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           802 AspArqValLeaLysArqSerAlaGluGlySerAsnProFroLysProLeutysLysLeu 821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           842 LysPheGlnGlnLysLeuAlaGluMetThrSerThrArgThrArgMetGlnLysGlnLys 861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               662 AsrilloAspl.cul.ysPbcl.ysTleHeVaTPhrAlaTyrLysAspl.cuProHisAlaVaT 481
                                                                                                                                                                            622 LeuGluHisllelleTrpThrLeuFheGluHisThrLeuGluAsuGluJyr:HuLeuMet 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2509 GGTGAATGATTTOOGGACTTOTGAGAAGTTOGAGAAATAAATGAGATGGTATGTAACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              822 ArgPheAspileGluClySerAspGluAlaAspSlyScriysHisLouProClyGluSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
2749 AFGANTAGCATGCATACCTCAAACAAGGAAGAAA 2787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               · 862 Met.AsuAspSerMetAspThrSerAsnLysGluGluLys 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ΝŶ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent: WO 0194629-A 1210 13-DEM-2001;
Avalon Pharmaceuticals (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1216 from Patent Web194629.
AX330701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             48 (4) hp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AX 3 3 0 7 0 1 . 1 G1 : 18 1 0 3 6 7 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene sets
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AX330701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOHENAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX330701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                               ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ^{\circ}_{\rm y}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \overset{\circ}{\nabla}
```

F EA	3.18 SOET	1.00 1.	ation,/@valifi .4839 aanism-"Homo	rs apien		
BASE	N. N.	1544.0	Aref 902	606" 7 15		
Ailta Pred Scor Ferc Hest Uner	Allument Sc Pred. No.: Score: Fercen' Simi Hest Local S Query Mutch.	Scores:	0 4499-00 100.00% 199.89% 6	Length: Matches: Conservative: Mismatches: Ind-1s Gaps:	4839 873 0 0 0	
- X	09 726	-459A+31 (1-87	4) x AX330701 (1-4839)		
5 g	463	AspPhethrAlab TELETITION CALITIAGICCAE	euCysClnLysLeub HTITITITITITI TAIGTEAGAAATTAA	YSTICPTCASPHISVE 	alangGluangAlainp HIIIIIIIIIIIII rcagagagaggungg	21 362
3 <u>8</u>	36.3	Leuthrirpslub ilillillill iraacridddada	yeValSerSerValA 	sp61;Valleu01;G1 	Lytyrilecialystys 	41
병물	423	EgsGisteufrpG + HILLHILLE AAssAArTsTstss	PylleCystlePher HIIIIIIIIIIIIIII GAATCTGIAIAICITIA	TeAlaAlaValAspLe 	auAspGluMetSerPhe 	ۍ 4
450 450	483	Threbethralata 	edd Infrys Asir 19ed FELLLI I I I I I I I I I I I TACAGAAAAACATAG	luileSerValHisly 	stysEhePheAsnLeufeu 	81
5 g	543	LysGluileAspi 	hrSerThrLysValA. 	SpAsnAlaMetSerAr 	rqLeuLeuLysLysTyr 	101
충출	102	AspVallesPheA	JalcuPhcSerfyst 	02. Aspvall.cof/hcalai.cof/hc8erl.gsl.cuGluargThr.CysClul.coff.Cyfrid 	gysclutesflefyrteurhr 	121 562
숙 중	122	GInProSerSerSe 11111111111 CAACCCAGTAGTT	er HeSerThrGlut HHIIIHHHHH GGATATCTAGTGAAA	leAsnSerAlaLeuVa 	alleutysvalserfrp 	- r-
중 중	142	IleThrPheLeuL	euAlaLysGlyGluV. [[[[]]]]]]]]]] [AddTAAaddGAAG	alLeuGlnMetGluAs 	spAspLeuVallleser 	16 78
학 급	184	PhedinicaMetha - - - - - - - - - -	euCysVallieuAspT 	yrPhellelysleusc 	elysteuserProPrometteuteu 	- &
₹ £	182	Lysgluprofyrt; Tillll AAAGAACCAIAFA	ysthralavalileP 	rolleAsnGlySerPr 	oargihrProargarg 	2 2
क्षेत्र क्षे	50°.	GlyglnAsnArqSe THTHHH GGTCACAACAGGA	erAlaArqIleAlaL 	ysGlnLeuGluAsnAs 	02 GlyGlaAsaArgerAlaArgIleAlaLysGlaLeuGlaAsaAspThrArgileIleGlu 	୍ୟ ଓ
학 를	222 963	ValleuCystysG 	Tulfischoysasni 	leAspCluVallysAs 	snVallyrPhelysAsn 	C11
25 Q	242 1023	PhelleProPheMellillill	et Asn Ser Leud I y Lo I I I I I I I I I I I I I I I I I'GAATT C'I C'ITTGGAC'	cuValThrSerAsnGl 	yLcuProgluValGlu 	261 1082
숙률	1083	Assize (SeripsArgTyrs1.6) 	rgTyrSlaGlaileTy 	yrletiysasilysas 	LysAspleuAspAlaArgleu 	281

```
| 1923 | CCTTCAGAAAATCIGAITTCCTAITITAACAACIGCACAGIGAAICCAAAAAAAAAGAIA | 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1503 GTAATGGAATCCATGCTTAAATCAGAAGAAGAACGATTATCCATTCAAAATTTTAGCAAA 1552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2043 TTCCAGACCCAGAGCCATTGAAAICTACCTCTTICACIGTTTATAAAAAAGTGTAT 2102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1443 CAGAGITGTGTGAAAAILGGALCACAGGAIACAAACIIGGAGITGGCIIGIAILACGA 1502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1683 TGGATTOTGAATGTGOTTAAATTTAAAAGGGTTTGATTTTTAGAAAGIGATGAAAGTTTT 1742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      282 Phd.cuaspHisasphysBhrLeuGlnrFraspSortHedspSortheGlnthrGlnarg 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  342 ProSerCluAsniculleSerTyrPhcAsnAsnCysThrValAsnProLysGluSertDe 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                422 LeuLeuAsnAspAsnIlePheHisMetSerLeuLeuAldCysAluLeuGluValValMet 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    442 AlaThrTyrSerArgSerThrSerGlnAsnLeuAspSerGlyThrAspLeuSelPhePio 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    482 ileLysAlaGluGlyAsnLeuThrArqGluMetileLysHisLeuGluArqCysGluHis 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             502 ArgileMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysGln 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  522 ScrlysAspArgGluClyProThrAspHisLeaGluSetAlaCysPtoLeuAsnLeuPro 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  542 LeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerProValArgSerProLysLys 561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                582 PheGlnThrGlnLysProt.cuLysScrThrScrT.cuScrt.cuPhcTyrLysLysVallyr 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                602 ArgionAlaTyrLenArgLeuAsaThrLeuCysGluArgLeuLeuSerGluHisProSlu 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    622 LeuGluHisIleIleTrpThrLeuPheGlnHisThrLeuGlnAsnGluTyrGluLeuMet 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         642 ArgAspArgHisLeuAspGln1leMetMetCysSerMetTyrGly11cCysLysVallys 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         362 TentysAcqVallysAspIleGlyTyrilePheLysGluLysPheAlaLysAlaUalGlyPlOTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTHH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTHH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTHH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HI
                                                                                                                                                                                                            402 ValMetSluSerMetLeutgsSerGluGluGluArgleuSerfleGlnAstrikaktigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          562 LysGlySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        322 ArgThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAshSetAluSerAspOln
                                                                                                                                                                    302 ThrProArtLysSerAsaLetAspGluGluValAsaVallluPruFroHisThrProVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .;
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
```

```
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOHENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDI LINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear PRI 05-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Structure and partial genomic sequence of the human retinoblastoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapieus retinoblastoma susceptibility protein (RBI) mKNA and mutations.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryola, Metaroa: Chordata, Craniata, Vertebrata, Duteleostomi,
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
                                           222 / AGAGAYAGGYATT EGAMOAAATTATGATGTTTCCATGTATGCATATGCAAAGTGAAG 2282
                                                                                                                                                                            1464 CCOCTACCTTGTCACAATACGTCACAATCGTCGAAACCCTTACAAATTGCTACTTGTCA 2522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2763 COUTTEGATATTGAAGGATCAGATGAAGCAGATGGAAGTAAAGATGTCCCCAGGAGAGTCC 2822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               742 ProbedardleProGlyGlyAsulleTyrlleSerProLeuLysSerProTyrLys1le 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              76.2 Ser NuGlybeuProThrProThrBysMetThrProArqSerArqIlebeuValSerIle 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   822 ArgueAspileGluGlySerAspiluAlaAspillySerLysHisLeuProGlyGluSer 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               842 LysPheGluGlnLysLeuAlaGluMetThrSerThrArgThrArgMetGlnLysGlnLys 861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    polymorphism analysis and polymerase chain reaction sequencing oucogene 7 (7), 1445-1451 (1992)
                                                                                                                                 662 AstalleAspleanysPhetysTleTleValThrAlaTyrLysAspleaproHisAlaVal 681
                                                                                                                                                                                                                                                                                                              682 dludluThrPheLysArqValLeuIleLysGludludluTyrAspSerIleIleValPhe 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          702 TyrAsaSerValPheMetSluArgLeuLysThrAsnIleLeuGlaTyrAlaSerThrArg 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            722 ProProThrLeuSerProTLeProHisTleProArgSerProTyrLysPheProSerSer 741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     782 CLYSTUSETPheallyThrSerGluLySPheGluLySTLeAsnGlnMetValCysAsnSer 801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 802 AspArqVallentysArqSerAladla61ySerAsnProProLysProLeuLysLysLeu 821
befection of heterozygous mutations in the RB1 gene in relinoblastoma patients using single-strand conformation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          retinoblastema prefein; retinoblastema susceptibility.
Home sapiens cDNA to mKNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              stadiat, Z., Baird, P.N. and Cowell, J.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86.2 Met AsuAspSerMetAspThrSerAsnLysGluGluLys 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mester, I.L., Yandell, D.W. and Dryja, T.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4839 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gene Bu (1), 119 128 (1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 susceptibility dene-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1,41870.1 01:79394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Home Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HUMKB I MKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (Sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   II: App. A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15361176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90006773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.41870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HUMBER I MRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RETANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MELGINIC
PUTEMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOHNNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ELECTERNO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILKNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1111E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11.11.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20,00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
```

```
Hogg,A., Bia,B., Omadim,Z. and Cowell,J.K.
McSecklain mechanisms of oncotanic installins in tumous from pathents
with bilateral and unilateral refinchiastoms
Proc. Natl. Acad. Sci. U.S.A. 90 (15), 7351-7355 (1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TETAAVIG TEMSETETETAKNIN LISVHKEENITAATSI STAVINAMAKKITAKYDVIFA
LESKLERTCELTYLTOPSSSI STETINSALVLKVSMITFILAKGEVLOMEDIDIVI SITAL
MICVLDYFIKLSPPMLLKEPYKTAVTETNGSPRIPRRGUNRSARTAKOLENDIETEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOKEHEGITDEVKNYYFKNETPPPMISJATATSNALPEVENTSKRYEETYLKIKRILAAK
LELDHDKTLQTDSTDSFETQKLPRKSNLDEEVNYTEPHTPVKTVMNTTQOLMMITINSA
SIQPSENTJSYFNNCTVNFRESTLKKYKDTGYTFKEKEAKAAAGAGAGGGKYKLAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RLYYRVMESMEKSEFEELEST ONE SKLEINENTEFHMSLE ATALEVVMALYSRST SUNTES
GTDESPPWTENVENERAFF 4FKVTESFTRAEGHET RHEEMFEHREMESLAMESE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SPLEDLIKQSKDREGPTDHLESA/PINIPLONNHTAAIMYLSPVESPKKESTIRVNS
TANAETÇATSAPÇTÇEPILESTSIEVEYPYRIAYIPINTE EPLISEHPELEHTIMT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.PQH1TQNEXELMKDRH1.DQTMMCSMPGTCKVRNTBJ.NFK++V+AYRJJ.PAAVQTTFK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RVLIKEEETYDS LIVEYNSVEMORLKINILQYAS I RPPILSP PHIPRSPYKEPSSPLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IPGGNIY LSPLKSPYK LSECHTIN KMIPRSKILIVS HOLSPOLISEK FOKT NOMYCNSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Partial inactivation of the KB product in a family with incomplete penetrance of familial retinoblastoma and benian retinal tumors oncogene 9 (5), 1321-1326 (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /translation="MPPKIPKKIAA1AAAAABEPPAPPPPPPPPEDPEDPEDFEDFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VRLIBEIGET BEFORT ALCOKOK FEBHYRBRAMI. I WENVSSMI AVIMINIA VERKELIMOTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RVEKRSAFGSNEPKFLKKI PELGEGSGEAGGSKULGGSKLOMISTRIDMOKO
                                                                                                                                                                                                                                                                                        Mechanisms of oncodenesis in patients with tamilial retinoblastoma
Br. J. Cancer 68 (5), 958–964 (1994)
                                                      Oncogenic point mutations in exon 20 of the FGH gene in families showing incomplete penetrance and mild expression of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6 (sites)
Kratzke,R.A., offerson,G.A., Hoga,A., Coxon,A.B., Geradis,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product-"retinoblastoma suspectibility protein"
/protein_id-"AAB59465.1"
                                                                                                                                    Proc. Natl. Acad. Sci. U.S.A. B9 (14), 6177-6181 (1992)
92335261
                              Onadim, Z., Hoqq, A., Baird, P.N. and Cowell, J.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mutation data provided by Dr. B.L.Gallie,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xret-"GDB:G00 118 7 84"
                                                                                                                                                                                                                               4 (sites)
Onadim, Z., Hogg, A. and Cowell, J.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E mail, brendashafiz.eric.on.ca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xret-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xret-"61:794995"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="RB1"
/note="G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ocation/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hospital for Sick Children
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cowell, J.K. and Kaye, F.J.
                                                                                                               retinoblastoma phenotype
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KMNDSMDTSNKEEK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /map-"14q14.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /codon_start |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /qene "kBl"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .2924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Toronto ONF W5G 1X8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ph: 416 813 5868
FAX: 416 813 4989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /number-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 555 Univ. Ave.
      (siles)
                                                                                                                                                                                                                                                                                                                                                                                                           (sites)
                                                                                                                                                                                                                                                                                                                      Br. J. Ca
94031584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94203660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93348271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8346255
                                                                                                                                                                                                    1352883
                                                                                                                                                                                                                                                                                                                                                                         8217609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Canada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
REFERENCE
                                 AUTHORS
                                                                                                                                          JOURNAL
                                                                                                                                                                     MEDI.INE
                                                                                                                                                                                                                               KEFEKENCE
                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                             JOHENAL
                                                                                                                                                                                                                                                                                                                                           MEDLINE
                                                                                                                                                                                                                                                                                                                                                                         PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOHRNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDILINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     dene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CXCD
```

```
/note-"Tumor GOS13 unilateral frameshift mutation resulting in premature stop; Associated with this mutation is a large 13914.3 sub-band deletion; GUO-118-734" /citation-[5]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Tumor GOS559 mutation causing premature stop.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       82 lysClulleAspWhrSerThrLysValAspAsnAlametSerArgLeaLeaLysLysTyr 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62 ThrPheThrGluLeuGlnLysAsmileGluIleSerValHisLysPhePheAsnLeuLeu 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 AspPhcThrAlaLeuCysGlatysLeuLysIleFroAspHisValArqGluArqAlaTrp
                                                    /hote-"Iumor GOS159 unilateral mutation causing a
premature stop; GOO-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-026-459A-11 (1-874) x HIMPRIMPNA (1-4834)
                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
/not.e="G00-118-734"
                                                                                                                                                                                                                                                                                                                                                         /gene="RB1"
/note="G00-118-734"
                                                                                                                                     /note-"G00-118-734"
                                                                                                                                                                                                                   /citation=[5]
/replace="t"
                                                                                 /citation-[5]
/replace-"t"
                                                                                                                                                                                                        G00-118-734"
                                                                                                                                                                                                                                                         /gene-"RB1"
                                                                                                           1352
                                                                                                                                                                                                                                                  375
                                                                                                                                                                                                                                                                                                                                               1353, 1469
                                     /gene="RBl"
                                                                                                                  .zec. .:55z
/qene="RB1"
                                                                                                                                                                               /gene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                    1400. .1401
              /number-11
                                                                                                                                                     /number-12
                                                                                                                                                                                                                                                                                                                                                                                       /number-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                          4499.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100 00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99.898
                                                                                                                                                                 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity.
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                           ratiation
                                                                                                                                                                  variation
                                                                                                                                                                                                                                                  variation
                                                                                                                                                                                                                                                                                                                                                                                                      variation
                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                                                                                exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :7
07
                       Austra "summar 00814 upillatoral mutation vansing a fontative wrong splice; G00-118-734"
                                                                                                                                                                                                                                                                                                                             /gene-"KB1"
/hote-"Tumor GOS561 unilateral frameshift mutation causing
                                                                                                                                                                                                                     /note-"RBF64 bilateral familial deletion mutation causing
                                                                                                                                                                                                                                                                                                                                                                                                            /qene="RB1"
/qene="Tumor GOS537 bilateral frameshift mutation causing
promature stop.; GOO-118-734"
/citation=15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Good e-"Tumbor 303568 unilateral Mortalion causing premature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zhote."Tumor dos559 mutation causing premature stop :
G00-118-734"
                                                                            275. .401
/qene="KB1"
/mote="G00 119 734"
                                                                                                                                                              Znote "G00-118-734"
                                                                                                                                                                                                                                                                                      /note-"G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /qene="RB1"
/note="G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /qene-"RB1"
/goto "qon-ji8-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="RB1"
/note="G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /qene="RB1"
/nota="Gn0+118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /nort.n="c;nn-11g-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /qot e="G00-118-734"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          stop: G00-118-734"
///imation-[6]
                                                                                                                                                                                                                                  premature stop"
/replace="ca"
                                                                                                                                                                                                                                                                                                                                                          premature stop"
                                                  /citation=[5]
                                                                                                                                                                                                                                                                                                                                                                                   /replace="ta"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /citation=151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'replace "e"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /replace "t"
          /qene-"RB1"
                                                                  /replace-"t"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /replace-"t"
                                                                                                                                                                                                         /qene="RB1"
                                                                                                                                                 /qene-"RR1"
                                                                                                                                                                                                                                                                           /qene-"kBl"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /dene-"RB]"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /qene-"RBI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1187. .1264
/qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /qene="RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /number-10
1095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1076
                                                                                                                                                                                         506
                                                                                                                                                                                                                                                           .637
                                                                                                                                                                                                                                                                                                                                                                      /citation
                                                                                                                                                                                                                                                                                                        /mumber-4
                                                                                                                                                                              /number-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6-Jaqwnu/
                                                                                                                        /number-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /number-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /number-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /number-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /number-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          500
                                                                                                                                                                                                                                                                                                                   variation
                                                                                                                                                                                           variation
                                                                                                                                                                                                                                                                                                                                                                                                   rariation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sariation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     uriation
                                                                               uox∂
                                                                                                                                                                                                                                                                nox.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HXOD
                                                                                                                                     CXCII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SWXH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HOXM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          e-xom
```

	-																	
181 842	201 902	221 962	241 1022	261 1082	281 1142	301 1202	321 1262	341 1422	361 1382	381 1442	401 1502	421 1562	441 1622	461 1682	481 1742	501 1802	521 1862	,
162 PhedIntermetracysvallerasplytebetletyslersethoprometrauler 	182 LysquiprofyrtysfbralavalllebrotleasnolyserbroarqfbrproarqAfred i Hillilli Hillil	202 01y31nAsnaraserAlaArd11eAlaLysG1nLeuG1uAsnAspThrArg11e11eG1u 	222 ValtaudystystystianistindysasniicaspoluvaliysAsnvaltyrihetysAsn HILLIHIHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH	242 PlanthefrophametAshGerhandtybeuValThrSerAshGiyLeuFrodhuValGlu HTHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH	262 Anni-weretysAratyrolikolisibeTyrkekiysAsniyoAspin-aspalaargleu PELLITITITITITITITITITITITITITI 083 AATETTETAAAOGATAOGAAATTTAICITAAAATAAAGATCTAGATGAAGATTA	282 Photomasphisasphysthrioudirchraspsorthoaspsortheologibrolnarg 	902 Thr Prodrat, ys Serasulands poludiuvalasa valite Proproitis Thr Proval FELT FE	422 ArgThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSeralaSeraspGln FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	44.2 Prosertinashleutlesertyrbheasnasneysthrvatashprolysettle 	(62-1 oct gegröß) gegen (1) ett griftliche Processi algesphen allen avalgty 	48.2 (duodycysvalolutheolyseroluarqtyrtystegolyvalarqtegtyrtyrarg 	492 ValMotGluSerMetLeulysSorGluGluGluArqLeuSerlieGluAsnPheSerlys HTHTHTHTHTHTHTHTHTHTHTHTH 593 STAATGSAATCCADGTTAAATCAGAAGAATATCCATTCAAAATTTTAGCAAA	422 TentenAsnAspAsnTePheffsMetSerfæutenATaCysATaLenGTuVaTVaTMet. 	442 ALATRITYLSELAKGSETTRISERGIRASBLEAGASPSERGLYTHIRSELEUSEPPREPROFILER HILLER H	462 ITPHELEMASHVALLEMASHLEMLYSSALAPBEASPPRELYTEKSVALHEGINSCPPE FELLING FELLING HELLING	482 TEELyschadladladlydsbleethrargdlametilelysBlisteadlaargcysGluffis TEELELELELELELELELELELE 743 AF AFAAACAGAAGCAATTGACAAGAAAAGATGAAAACATTAGAACGATGTGAACAT	502 ArglieWeigliserfzenAldTrpLeuSerAspSerProLeuPheAspbeullebysGli 	(1997) Gore (1988) der Arent Tenta (1988) for Arent For Aces (1988) and accordance for the contract contract
99 99	<u>م</u>	99 116	75 75	5 g	5 da	97 10b 1	5 8	25 25	C7 DE 1	55 25 1	557 105- 1	0% 13b 1	5 2	5 4 2		5 3	à â	1

```
2403 TATAACTCGGTCTTCATGCAGAGTGAAAACAAATATTTTGGAGTATGCTTTCGACCACC 2462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1923 CHCCAGAATAATCACACTGCAGCAGATALGTATCTTTTTTCTGTGTAAGATCTTTTAAAGAA 1982
                                                                                                                                                                                                                                                                                                   2163 TTAGAACATATCATCIGGACCCTTTTCCAGGACCCTGCAGAATGAGTAIGAACTCAIG 2222
                                                                                                                                                                                                                                                                                                                                                           2223 AGAGACAGCATTIGGACCAAAIIAIGAIGTICCAIGIATGGCAIAIGCAAAGIGAAG 2282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2523 CCCTTACGGATTOCTGGAGGGAACATCTATATTTCACOCTGAAGAGTCCATATAAAATT 2582
                                                                                                                                                                                                                602 ArqLeuAlaTyrLeuArqLeuAsmIfrLeuSysGlaArdLeuSeuGluHistroSlu 621
                                                                                                                                                                                                                                                                        622 LeuGluHisllellelTplhrLeuPheGlnHislhrLeudluAsuGln1yrGlnLeuMet 641
                                                                                                                                                                                                                                                                                                                                682 GinGluThrPhetysArqValLeuiletysGluGluGjuGyrAspSerlletTeValPhe 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      742 ProbouArg11eProG1y61yAsn11eTyr11eSerProboulysSerProfyt1ys11e 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              762 SerCluClyLeaProThrProThrLysMetThrProArgSerArgIleLeuValSerIle 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               802 AspatgValLouLysAtqSerAlaGluGlySerAshProProLysProLoullysEysLon H21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #22 ArqPheAspileGluClySetAspCluAlaAspClySetlySHisLeuPredlyGluSer #41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            842 EysPheGlnGlnLycLeuAlaGluMetThrSerThrArqThrArqMetGlnLycGlnLys 861
                                          542 LeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerProValAraSerProLysLys 561
                                                                                                562 LysGlySerThrThrArgValAsnSerThrAlaAsnAlaGluthrGlnAlathrSerAla 581
                                                                                                                                                                                                                                                                                                                                                                                        662 AsnileAspLeuLysPheLysIleileValThrAlaTyrLysAspLeuProHisAlaVal 681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2883 ATGAATGATAGGATGGATACCTCAAAGAAGAGAAA 2921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     862 MetAshAspSerMetAspThrSerAshLysGluGluLys 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                        . aa
                                                                    9
                                                                                                                          q
                                                                                                                                                                                  9
                                                                                                                                                                                                               ô
                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                               qd
                                                                                                                                                                                                                                                                                                                                οy
                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a:
                                                                                                                                                          õ
                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                . 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
```

qd S	a 6 a 6 a 6	9 6 6 7 F		්ර සි	φ ₀	 			ර සී	 	6	qα	yo da	79
1861 290			21 225	41 285	61 345	81 405 .	101 465 '	121 525	141 585	161 645	181	201 765	221 825	,
70		٨.,	GGluArgAlaTrp 	rileginlyslys 	pGluMetSerPhe 	ePheAsnLeuLeu 	uLeuLysLysTyr 	ulletyrLeuthr 	uLysValSerTrp 	pLeuValileser TCTGGTGATTTCA	OPLOMETLEULEU 	gThrProArgArg 	rArgileiledlu 	
03.	11, D.W. 989; 454 t	Longth: 45972 Matches: 872 Matches: 0 Mismatches: 1 indels: 0 daps: 0	459A 31 (1-874) x 109369 (1-4597) AspPheThrAlaLeuCysGlbLysLeuLysIleProAspHisValArgGluArgAlaTrp (11111-1111111111111111111111111111111	LevThrTrpShurysValSerSerValAspGlyValLouGlyGlyTyrThoGlnLysLys 	1938) as aft polyticcysticthed ablavalaspleadapol uMctSet the HTTLLLTTLLTTLLTTLLTTLLTTLLTTLLTTLLTTLLT	ThrPheThrGluLeuGlnLysAsnIleGluIleSerValHisLysPhePheAsnLeuLeu 	LysolulleaspThrserThrlysValaspasaalametSerargLeuLeuLysLysTyr 	AspVallouPheAlaLeuPheSerLySLouGluArgThrCysGluLeulletyrLeuThr 	GINProserSerIleSerThrGluIleAsnSerAlaLeuValLeuLysValSerTrp 		PhedinkumethengysvallauasplyrPheilenysLeuserProProMetheuleu 	LysoloficTyrLysThralaValllePrcIleAsnGlySerProafsthroargarg 	Glysluacaargseralaargilealalyssladessluasaaspfhrargileilette 	
atent WO 89067	Unknown. M Unknown. Unclassified. 1 (bases 1 to 4597) Dryjart.P. Friend, S. and Yandel DIANNOSIS OF RETINOBLASTOMA Patent: WO 8906703-A 1 27-JUL-15 iocation/Qualifiers 1. 4597 / Organism-"unknown"		109369 (1-4597) schabysbeubyshe	rservalAspGl; 	s ilethe Heala Hillillill	sAsnIleGluIle 	rtysvalnspns: 	ieSertysteuglu 	rThrGluIleAsn HEBELLIHH HACHGAAATAAAT	sGlyGluValLeu 	LeuAspTyrPhe 	aValileFrcile 	gilealaLysGln FELLETTIII GATAGCAAAACAA	
nde l from Pa 9 9 l dis8780	wm. ssified. ases 1 to 4597) T.P. Friend. S. T. WO 8906703-A Location/Oua Location/Oua Acqanism-"u	0 4492.00 y: nq Raw rity: 99.89% 6	(1-874) x IO hrAlaLeuCysGl	rpGluEysValse 	afrp51y (1cCy 	hrGluLeuGluLy 	PASPTERSERTE 	ouPheAlaLeuPh 	erSerSerllese 	heLeuLeuAlaLy 	::::::::::::::::::::::::::::::::::::::	roTyrLysThrAl 	abargSeralaar 	
DEPINITION Sequence ACTESSION 109369 VERSION 109369 KEYWORLS	SOURCY UNKNOWN CHEERENCE I (b. AUTH-RES DEV) a TITLE CHEERENCE I (b. AUTH-RES DIAGNAL PATENCES SOURCE HARE CHEERENCES CONTRACTION CHEERENCES CONTRACTION CHEERENCES CONTRACTION CHEERENCES CONTRACTION CHEERENCES CONTRACTION CHEERENCES CONTRACTION CHEERENCES CONTRACTION CHEERENCES CONTRACTION CHEERENCES CONTRACTION CHEERENCES CONTRACTION CHEERENCES CONTRACTION CHEERENCES CONTRACTION CHEERENCES CONTRACTION CHEERENCES CONTRACTION CHEERENCES CONTRACTION CHEERENCES CONTRACTION	idinoit Scores: od. No.: ore: reent similarity st Local Similar.	26.2	THEFT 126 IIACIIC	42 (783) 43 	62 ThrPheTi	82 LysGlaI 	102 AspVall. 111111 456 GAIGTAT	122 GinProse THITH T26 GAACCCA	142 IleThrP 	162 PhcGlillo 	182 LysslaP 	292 glysluA: 	
ACC'ES VERSI KEYW	SCORPY ORG ORG ORG TITE TITE TO HEATO HEATO HEATO PRASE	Allument Pred. No Score: Percent Best bord onery Mat	US - 0.9 QV 70b	: <u>a</u>	5 8	š î	5 f	\$ 5 E	र्दे है	S &	67 G	à a	cy GB	

```
946 AATCTITCTAAACGATACGAAGAAATTIAICITAAAAAIAAAGATCTAGATGCAAGATIA 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1186 PETEGAGAAAATGEGALELGGIATIFFAAGAAGTGGAGAGTGAATGCAAAAGAAAGFAFA 1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1666 CSANTOATSBARTOOTIFBUALGSCIOTCASARTOACCITIATITIGAICTIÁITAAACAA 1725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1726 TGAAAGGAGGGAAAAGAAGTGALGAGTTGAGTTGAATGTGCTTGTTTAAFGTTGCT 1785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1786 CTCCAGAATAATCACACTGCAGCAGATAIGTATCIITCTCCTGTAAGATCTCCAAAGAAA 1845
                                                               322 ArgThrValMetAsnThrIleGlnGlnLeuMetMetileLeuAsnSorAlaSorAspGln 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     382 CinGlyCrsValCluileClySerClaArgTyrigs.cuClyValArgi.cutyrtyrArg 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       402 ValMetGluSerMetLeulysSerGluGluGluArgleuSerfleGluAsuPheserlys 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        442 AlaThrTyrSerArgSerThrSerGlnAsnLeuAspSerGlyThrAspLeuSerFhePro 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             462 TrpIleLeaAsnValizeuAsnLeaLysAlaEbwAspPhcTyIIysVallIeG1USerPhe 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  482 IleLysAlaGluGlyAsmLeuThrArgGluMetIleLysHisLeuGluArqCysGluHis 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          522 SeriysAspArgCluClyProThrAspHisLeuGluSerAlaCysProLeuAsmLeuPro 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           542 LeuGlnAscAsnHisThrAlaAlaAspMetTyrLeuSerProValArqSerProLysLys 561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  562 LysGlySerThrThrArgValAsnSerThrAlaAsnAlaGluThrGlnAla1hrSerAla 581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       582 PheStarbirOlatysProtectingSerrbrSerrccSerrccuSerrysPaysTys 601
                                                                                                                                                         262 Asn.caScrigsArgTytSlaGlatteTyrt.culgsAsn.gsAspl.cuAspAlaArdl.cu
                                                                                                                                                                                                                                                   282 PhotocaAspHisAspLysThrLeuGlnThrAspScrlleAspSerPheGluthrGlnArg
                                                                                                                                                                                                                                                                                                                                                                 302 ThrProArqLysSerAsnLeuAspGluGluValAssVallleProProBisThrProVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                    362 LoutysArqValLysAspileGlyTyrilePheLygSlutysPheAlaLysAlaValGly
```

```
PAT 08-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2565 - GAPOTELLI FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET FELLET
1906 TTCCAGACCGAGAAGCCATTGAAATCTACCCCTTTGACTGTTTTATAAAAAAGTGTAT 1965
                                                                                                                                                                                                                                                                                          THEFT THE THEFT HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE HITTELLE SOBS
                                                                                                                                                                                                                                                                                                                                                                                                                                                    2086 AGMSACAGATTOGACCAAATTATGATGTCCATGTATGGCATATGCAAAGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2146 AATATAGACCITAAATEGAAAALGATEGTAACAGCATACAAGGAFCTTCCTCATGCFGTT 2205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2,386 POCTTAPGGATTOOTGGGGAACATCTATATTCACCCCTGAAGAGTGCATATAAAATT 2445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  zzen fataattoggitti teatgoagadattigaaaataittooagiatgiiteoacagg z325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    822 ArqPheAsp11e31uG1ySerAsp31uAlaAsp61ySerLysHisLeuProG1yG1uSer_841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               842 LysthedindiniystenAladiuMetThrSerThrArgThrArgMetGinLysChilys 861
                                                                                                                                                                                                                                                                                                                                                                                                                     642 ArgasparghisLonaspGlb1LeMetMerCysSerMetTyrGly1LeGysLysValLys 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           682 GlusturthrPhetysArqVaileenTleLysGlustusTyrAspSerIleIleValPhe 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              702 PyrAsnSerValPheMe+GlnArqLeuLysThrAsnTleLeuGlnFyrAlaSerThrArg 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            762 SerGludlyLenProThrLysMetThrProArqSerArq11eLeuValSerT1e 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                802 AspArqValleoffysArqSerAletloffySerAsuPreProLysProLetlysLysLev 821
                                                                                                                                                                                                                                              622 LeuchullistletteTrpThrLeuPheGluHisThrLeuGluAsnGluTyrGluLeuMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                [ (Bases | 10 2995)
Oregory's A.J. Wills,K.N. and Maneval,D.C.
Recombinant adenovical vector and methods of use
Patient: US 62199999 A 7 93 APR-2991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2745 ALGAALGALAGGALGGALAGGTIGAAGGAAGAAGAAA 2784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   86.2 Met AsnAspSerMet AspThrSerAsnLysGluGluLys 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 7 from parent US 6210939.
ARI44797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ARI44747 1 GI-15106664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unclassitied.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknewn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PEGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PATHENAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AF1447'97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
```

Location/Qualitiers

PEATURES

```
964 GITCTCTGTAAAGAACAIGAAIGIAAIAIAAGAGGGGGGAAAAAIGTTTATTTCAAAAAT 1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1024 TTTATACCTTTTATGAATTCTCTTGGACTTGTAACATCTAATGGACTTCCAGGGTTGAA 1084
                                                                                                                                                                                                                                                                                                                                 182 LysGuProTyrLysthrAlaVal HeProtLeAsuGlySerProArqtheProArqArd 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       282 FhelicalsphisAsphysThillerahinThiAspSet DeAspSet FlowinthinchnArg (0)
                                                                                                                                                                                                                                  142 IleThrPheLeuLeuAlaLysGlyGluValLeuGlnMetGluAspAspLeuVallleSer 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               904 OCTICAGAACASGACTICCACOGATACCAAACTAGAAAATGATACAAGAATTATTIGAA 963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   262 AssileuserLysArgTyrSluGluHeTyrTani,sAssilysAssilanbabAlaArgiau 281
                                                                                                                                                                                                                                                                                                     864 TTPAACTTGGGAGAAAGTTTGATGTGGATGGAGTTGGGAGGTTATATTFAAAAGAAA 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                     82 TyselulleAspThrSerThrLysValAspAssAlaMetSerArgLeuLeuLysLysTyr 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              102 AspValLeuPheAlaLeuPheSerLysLeuGluArqThrCysGluLeuTleTyrLeuThr 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        162 PheGInLeuMetLeufysValLeuAspTyrPhellotysLeuserProProMetLeufen 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       202 GlyGlnAssArqSerAlaArqIleAlaLysGluLeaGluAsuASpThrArallealualu 221
                                                                                                                                                                                                                                                                          2 Aspendin AlakeuCyschilystentystlere oAspitisValArd Thandalarp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62 ThrPheThrGluLeuGluLysAsnlleGlulleSetValHisLysPhePleAsnLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                222 ValLeuCysLysGluHisGluCysAsnileAspGluValLysAsnValTyrPheLysAsn
                                                                                                                 Conservative:
                                                                                                                             Mismatches:
                             810 +
                                                                                     Length:
Matches:
                                                                                                                                            Inde Is:
                                                                                                                                                                                      US-09-026 459A-31 (1-874) x AR144757 (1-2595)
                                                                                                                                                            :sdrp
            /organism-"unknown"
1 617 c 593 q
                                                                                                4489.00
                                                                                                                             94,838
                                                                                                                  868.66
36.67
                          975 a
                                                                                                                              Best Loral Similarity:
                                                                                                                 Percent Similarity:
                                                                       Aliqument Scores:
                                                                                                                                           Query Match:
                             HASE COUNT
                                                                                     Pred. No.:
                                          OKICIN
                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                    ó
                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                               G
                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                        뎚
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                             ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ं
```

4	† † † 1	TITITEGATGATGAAAACICITGAGACIGATCIATAGAGAGITITGAAAAGACAGA	, 1203
<u>\$</u>	705	ThirroatdiysSerAsmicuAspGluGluValAsmValileProProHisThrProVal	321
3 3	1204	ALAG ALGAAAAAG AACCI GALGAAGGGGAATGTAALTCTTCCACACACTCTTCCACTT Arginryalmetasnihillegingloleemetmetmetssssssssssssglo	1263 341
<u>ء</u> څ	1264	AGGACTGTTATGAAGACTATGCAAGATTAATGATGATTTAAATTGAGGAAGTGATGAA	1323
5 3	1424	Probers mashidu reseriyamcashashiya nyarashrolyshilserile hiji hilililililililililililililililililili	361 1383
25 g	484	Tennysthean in ysaspileolythii ethetyschulystheatalauysately 	381 1443
ás di	1444	G1003 y0ysValG1vI1eG1ySerG10ArgTyrLysLeuG1yValArgLeuTyrTyrArg 	401
5 6	402	ValMctGluSerMctLculysSerGluGluArgleuSerIlcGluAsnPheSerLys	421 1563
5 8	122	LeuterasmaspasniterheutserleuteralacysalateutuvalValmet 	441
à 8	14.2	AlathriyrSetArqSetThrSetGlnAsnLouAspSetGlyThrAspLeuSetPhePro (461 1683
5 4	46.2 1684	ITP elcoasmValleouAsmleoulysA aPheAspPheTyrlysVallleG uSerPhe 	481 1743
5 3	482	TelysaladiudiyasblouthrarqdiumoriiolyshisloudiuargCysdiuhis Helieliii Hilliliii Hilliliii Hilliliii Hillilii Hilliliii Hilli	501
à -	5.02	ArqlieMetGluserLeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysGln	521 1863
5 8	5.22	SerlysaspargeledlyProffmaspHisteaGluSeralaCysProfeusmicuPro- 	541 1923
§ 2	542	LeuglnasnasniisihralaalaaspieettyrLeugerprovalarggerproiysLys 	561
à 2	562	Epicol y Synthetherara/albansertheblaasnalaglutheglaalatheserala	581 2043
각 용	182	982 Phochaibrdialystrologisserfagerfouserlouserroutheryrtyslysvalyr 601 HTHTHTHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH	601 2103
5 2	4 o 4 2104	Ardiceral atyricular gleudsmithriculdysCludrgliculculscrCludfisproGludicolori i i i i i i i i i i i i i i i i i i	621 2163
5 6	622	Leushallistle II PTEThrieuthe Sinfisthrie and aksonia Tysolabennet 	641
64 6	642	Argaspat gits cuaspgin i emermetcys sermettyrciy i) ecyslysva i i s i i i i i i i i i i i i i i i i i	661 2283

```
HUMRES 4740 bp mRNA linear PRI 12-JUL-1995
HIMAD retinoblastoma susceptibility mRNA, complete cds.
M15400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 243 to 4740)
Lee,W.H., Bookstein,R., Hong,F., Young,L.J., Shew,J.Y. and Lee,L.Y.
Homan rethioblastoma susceptibility wene; cloning, identification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metassa; Chordata; Craniata; Vertebrata, Enteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lee, E.Y., Bookstein, R., Young, L.J., Lin, C.J., Rosenfeld, M.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Draft entry and computer-readable copy of sequence in [1] kindly
provided by E.Beckstein, 27 AFR-1997.
2404 TATAACTCCGCCTCTCATGCAGAGTGAAAACAAAINTTTTGCAGTATGCTTCCACCAGG 2453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ROP | ASPATYO | LOTTYSARTSERALS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | LOTS | L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2524 CCCTTACGGATTCCTGGAGGGAACATCTATATTTCACCCTGAAGACTCCATATAAAATT 2583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2584 TCAGAAGGTCTGCCAACACCAACAAAAATGACTCCAAGATCAAGAATGTTAGTATCATT J643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        782 GlyGluSerPheGlyThrSerGluLySPheGlnLySIleAsnGlnMetValCysAsnSer 801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          762 SerGludiyi.eu/roihrProihrLysMetThrProArgSerArgileLeuValSerIle 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  722 ProProThrLeuSerProlleProHislleFroArgSerFroTyrLysPheFroSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2764 CGTTTGATATTGAAGGATCAGATGAAGCACACAAGTAAACATAAACATCTCCAGGAGAGTCC
                                                                                                                                                                      682 GlnGluThrPheLysArqValLeulleLysGluGluGluGluTyrAspserllelleValPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Modewnlar morbinism of retinoblastoms gene inactivation in retinoblastoms cell line \Upsilon 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    retinoblastoma susceptibility.
Homo sapions (clone: RB-(1,5)) foctus retina cDHA to mKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Proc. Natl. Acad. Sci. U.S.A. 85 (16), 6017-6021 (1988)
88320373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2884 ATGAATGATAGCATGATACCTCAAACAAGGAAGAAA 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                862 MetAsnAspSerMetAspThrSerAsnLysGluGluLys 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Science 235 (4794), 1394-1399 (1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        M15400.1 GI:190958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 480)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           87149066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lee, W. II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3823889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3413073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PEFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HUMRES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    - 유
---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ..
Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ά
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          :.
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
```

```
Cross state 14. AAAK-qrott 1".
Ab_xret. "GI:190959".
Ab_xret. "GI:190959".
Att.xret. "GI:100080 118-7.4".
Att.xret. "GI:10080 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LESKLEHTGELTYLTQPSSSISTETNSALVLKVSWITFI LAKGEVLQMEDLI VISEQL
MICVLOYFIKISPPMILKEEPYTAVT PINGSPFPFRGOORSEN LAKGLEDTRITEV
MICVLOYFIKISPPMILKEEPYTAVT PINGSPFPFRGOORSEN LAKGLEDTRITEV
MICVEDPRILL TSTANDS VINET PRESENCE OF THE PVETVWNTT GOLDWILLNSA
SLODSEMILLSF NINGT VINETS LIKEWENDLOT FIREFREAKOGOCVE GOSPKTIGV
MICY RYWESMIK SEERIN STOWESKILL MONTE PHASIL ACALEVVWATTY SKSTSONLISS
GTDLSFPWILLNVLK AFFFFYKLI MONTE PHASIL ACALEVVWATTY SKSTSONLISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SPLEDLIKQSKIPEGSPTIGILENACPLNI-PLQNNHTAAI-MYLSPVRSFKKGSTTRVNS
TANAETQA I SAPOTQKPILKS SELEYKKVYRLAY LRUNTLOERLESEIPELEHITINT
L-PUHTLOUENSPERMEDHHJAOTBMCSMYOTGKNW NDTAKEN I VYAYKDILHAVQETEK
RVLT KREENTSST TYN SVEMBOKEK MILLOMAS TROUTLSPTPH LVKSPYKRSSPTR
HVCT KREENTSST TYN SVEMBOKEK MILLOMAS TROUTLSPTPH LVKSPYKRSSPTR
HVCT KREENTSST TYN SVEMBOKEK MILLOMAS TROUTLSPTPH LVKSPYKRSSPTR
PVILK RAAFGASPRKPI KRIPPOLEGSFRANGSRHI PRESKRIPGATSTTPMQRQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Znote-"retinoblastoma susceptibility protein"
Zeodon start:1
                                                                                                                                                                                                  And white the sapiens (Ap. Yelone Tell) And the same the same the same type. The same type. The same type. To the same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. The same type. T
Location/Qualifiers
1. .4740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zqene "RB1"
Zproduct "rbs mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KMNI-SMI-TSNKEEK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /qene-"RB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              149. ...2925.
Applier "RBI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.74++
                                                                                                                                                  Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 171.17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7.
1.
1.
PEATURES
```

EASE CAINT 1508 a 887 c 862 q 1483 t CHIGH 1038 bp upstream of Ecoki Site; chromosome 15q14.1-q14.2.

US 09 026 459A 31 (1 874) x HUMRBS (1 4740)

2 0	7	AspthethrAlabeuCysClntysLeutysTleProAspHisValAraCluArgAlarp	21
30	104	804 (ATTTTACHOTATIANGHARANAAAATAAAGAACAGATCATCAGAGAGAGAGAGAGAGAGAG	363
Sr.	? ?	10 -	4 1
qo	46.4	HAATHGGGAGAAAGHTGALGTGGALGGAGAGTAHGGGAGGTTALAHTGAAAAGAA 423	423
	4.2		6.1
÷	474	AAAAAATGTGGGGAAATCTGTTTTTTTTGGGGGGAGTTGACTTATGAGTGTGTGT	483
ij	5.2	62 ThrebethrelinicalingsAsnifeedivileSerValHisiysPhePheAsnieule 81	
4	484	484 ACTITACERIA MARAAAARA MAAAAA MAAAA MAAAA MAAAAA MAAAAA MAAAAA MAAAAA MAAAAAA	542
ŝ	3.	81 utyschulleAspThrSerThrLysValAspAspAlaMetSerArgLeuLeuLysLysTy	101
<u>a</u>	£.4.	54 s. AAAAGAAATIGATAYYAGIACY AAAGIIGAIAAIGGIATGIAGIIGIIGAAGAGATA	209
	101		121
÷	6.03	TOATGTATTGTTTGGACTCTTCAGGAAATTGGAAAAGGACATGTGAACTAATATTGAC 662	662

à â	121	rGhiproserSerSerDeserThrGhilleAsnSerAlabeuValloedysValserTr 	14.1
à à	141	PILETBEPE-Ceuloualalyschyshuvalleushumetshuaspaspaeuvalihese 	14.1
oy Et	161	rPheGInteumettaugysValleuaspiyiPhelletystauseifrodromenteult 	181 84.2
Qy Dp	181	uLyschuProTyrLysTurAlaValTheProHeAsuchyserProArgThrProArgNTHHH 	107
ភ ដ	201	461 yG1nA6BAF980FALJAF411-FALALQ38G1nLF-G81-A85A8-4-31L-81-11-41-11-1 	221
C.7.	221	9V31LCGCÇS1L7SCTGHESCTGT7SASETEASFCTGV1L25SASEVJ17FEB. EQSASE [HTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	241 1022
č da	241 1023	nPheTLeProPheMctAsisSertesd1yftesValthrSerAsiis1yfte 185 (3), Valth HTHTHTHTHHHHHHHHHHHHHHHHHHHHHHHHHHHHH	261 1082
P. P. P. P. P. P. P. P. P. P. P. P. P. P	261 1083	"MSnLegSerLysAraTyrGluGlufleTyrLegLysAsnLysAcplegAsFAlaArdle HTHTHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH	281 1142
9. dg	281	uPheleu dspifisasplysThrl euGlinthraspsertleaspsertbechushushuntillit. 	101
5 G	301	9Thr ProArglysSerAsnLeuAsp61u61uValAsuVall116ProFroifisThr ProVall111HTHTHTHTHTHTHTHTHTHTHTHTHTHTHTHTHTH	121
O G	321 1263	ArqThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAspell	141
oy Db	341	nprosorGluasillesertyrPheasilashCysthi Valasilprotysslusertl [[1487
oy Ob	361	eLeutysArgValtysAspiledlyTyrflatbebysSlutysPbalutysAluvulGl 	3B1
S G	381	yGlnGlyCysValGlyIlleGlySerGl;Arq?yrLySLeuGlyValArgLeGTyTTyrAr 	401
O _Y Db	401	gvalMetGluSerMetLeuLysSerGluGluGluArqlaauSerlleGluAshBheserLy 	421
ç a	421	421 SEPALPANASPASPITI PPRPHISMPESOFICOLARIAN SATIALONG PATALATAN 441 HTTLITTER HTTLI	441 1622
ep 6	441	t AlaThrTyr SerArg SerThr SerGlinas de was pser Glythras de oeserfeet 	46.1
Oy Dp	461 1683	OTPH HOLDARING LEGIASHLEGLYSALAPHEASPHELYLESS VALHEGLUSETPH THE HITTELL HITTEL	481 1742

. Db 2	. Oy .	RESULT A01444 LOCUS DEFINI	ACCESS VERSIO KRYWOR SOURCE	ORGA REFTRE	AUTH	JOUR FEATUR S	BASE O	Alignm Pred. Score:	Percen Rost L Query DB:	60 SA	5: B	출 중	ਜ਼ੇ ਨੇ	fi 6	₹ 8	i 5	සී ට්	<u> </u>
- 00	- 9		61 982	R] 042) 02	-	1 22		81 342	1.02	21 462	en Ce	ιάς (9	1 5	1 02	1	C1 C1	
effetysaladiudlyasniculhrangdiumetiletysBisleudluargdysGluHi 50 	SAFAIleMetGluSerLeuAlaIrpLeuSerAspSerProLeuPheAspLeuIleLysGl 5	GSerLysAspArqGluGlyProThrAspHisLeuGluSerAlacysFroLeuasnLeuPr 541 	of our loasoas	SLYSOLYSETDETHEAFGVALASINSETDEALASINALIGHUFDFFLUALAFBESEFALS 	aPhechthropolysProLeutysSerThrSerLeuSerLeuDheTyrLysLysValTy 601	rargioualajyricuargicuasmihricuCysGluargicuicuScrGluHisProG 62 	TibendicHisTleTheTrpThrLeuPhedinHisThrLeuGlnAsndluTyrGlnLeuMe 64	TAFAASFAFOHESEMASPCINITEMECTASSBEMETTYFOLYITESFSEYSVALEY 66	SASGLIEASPICULYSPECTYSTICTICVATTERALSTYTLYSASPICUPTOHISALAVA 6 	1 IGLUGLUTAEPRELYSAESVALLOSTISOSTISOSTATISTEETTI ETTOVATEN 701 ISTEETTETTI ITTETTI INTERPREPARATORES TOTAL ISTEETTETTI ITTETTI ITTETTI ITTETTI ITTETTI ITTETTI ITTETTI ISTOOGASIACATI ICAAACCICTTI TOATICAAACAACAACAACAACAACAACAACAACAACAACAACA	PERFASSISSEVALPHSMAGGLAARGLEARGEBERGLEELEGIGTBYRALGEFLARA 7 	aprobledbricaSectrolictroHistleProatgGcrProJyraysBhcProSec 741 	rProteukiiileProGly3lyAcofloTyrIleSerBroLeutysSerBroTyrLysII	. eSeriluslyLeuProThrProThrLysMetThrProArqSerArq1leLeuValSerII 781 	1 cClpringerPacCyrhrSerClutySPheClotysTlcAst.CloMctVa;CysAstSc 861 	FASPARTAVATLOUI ÇAZIĞSOZATAĞINGI YSPERAGOREOPESI YARIT DOLUÇAT, SEG 82 HTTLITTLITTLITTLITTLITTLITTLITTLITTLITTL		1 rlysebecinciniysLeuAlacioMetThrScrThrArgThrArgMetGlnLysGlnLy 8
48 174	5.51 16.03	18.6	1.2	₩ ₩ 1	581 . 43	feet 2103	41.4	6.4	g y	18°3	To a series	72	7 47 7.	# 85°	p. 44.	x 6.	3 %	r 4
5 8	55 139	ಕ್ರಿ ಪ	ÿ ∄	÷ 2	÷ 3	55	3 Ê	5 å	5 3	중 출	ਨੇ ਤੋ	5 3	S ±	5 8	\$ £	8 2	3 3	š

```
linear PAT 18 FEB-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fung, Y.K.T., T'Ang, A., Murphree, L.A. and Benedict, W.F. Amethod for detecting the predisposition to relinoblastoms and a method for detecting a relinoblastoms gene in tumors using a relinoblastoms gene probe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota, Metaloa, Chordata, Cranlata, Vertekrata, Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 4580)
82 LysGluIleAspThrSerThrLysValAspAsuAlaMetSerAlqLeuLysLysTyr 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HITTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELlettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettellettel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     102 AspValleuPheAlaLeuPheSerLysLeuGlaArqIhrCysGluLeuIleTyrLeuThr 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      332 ACTITIACTGTGCTACAGAAAAACAIAGAAATCAGTGTCCATAAATTCTTTAACTTACTA 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62 ThribheThrdisLeuGlnLysAsslieGlaileSerValHisLysPhethcAssheuLeu 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 AspPhcThralaLeuCysClnLysLeuLysTlcProAspHisValArgCluArgALathp 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AU1444 18 SAPINA 10 TO TO TO TO THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE SAPINAS ON THE 
                                                                                                                                                                                                                                                                                    2883 AATGAATGATAGGATAGGTGAAAGAAGAAGAAA 2922
                                                                                                                                                                                            861 sMet.AsnAspSerMet.AspThrSerAsnLysGluGluLys 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent: EP 0293266-A 1 30-NUV-1988:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo_sapiens"
/db_xret="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESEARCH DEVELOPMENT FOUNDATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         000 459A-31 (1 874) A A01444 (1 4080)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6.07e-317
4378.00
98.74%
98.40%
97.20%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           840 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A31444.1 G1.345125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .4580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1477 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nt Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KNAI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                日
```

				•					
181 691 201 751	221 811 241	261 261 281	301	321 1111 341 1171	361 1231 381 1290	401 1350 421 1410			
162 Phe Intermetranty systicons propertie by Struser Probrometrouser Probromet	202 (1) 93 InAshAroserA LaArotteAlatys©inteeGluAshAspThrArotteHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH	24.2 Phottophoworananananananananananananananananananan					42 141 44	46.2 TEPTICLG WASHVALLE WASHLOUD YSALAF Browspitch y FLYSVALL FOLLSGEPHCE FILLIC CONTROL OF THE SECOND OF THE SECOND OF THE SECOND OF TAXABLE WASHLOUD OF TAXABLE WASHLOUD OF THE SECOND OF TAXABLE WASHLOUD OF THE SECOND OF TAXABLE WASHLOUD OF THE SECOND OF TAXABLE WASHLOUD OF THE SECOND OF TAXABLE WASHLOUD OF THE SECOND OF TAXABLE WASHLOUD OF TA	502 ArgileMetGluserLeuAlaTrpleuserAspserProLeuPheAspleuIleLysGlu Hittitititititititititititititititititi
			- 독 곡 :	5 4 5 4	5 4 5 4		그 학교 학교		

```
2071 AGAGACAGGATTTGGACCAAATTATGATGTGCATGTATGGCATATGCAAAGTGAAG 2130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2251 TATAACTCGGTCTTCATGCAGAGACTGAAAAAAAATATTTGGAGTAFGCTTCCACCAGG 2410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2610 GGCTTTGATATTGAAGGATCAGATGAAGTAGAAGTAAACATATATAAACAGAGAAGAAGAAA
                   1951 CGGCTAGCCTATCTCCGGCTAAATACACTTTGTGAACGCCTTCTGTGAGCACCCAAAA 2010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2191 CAGGAGACATTCAAACGTGTTTTGATCAAAGAAGAGGAGTATGATTCTATTATAGTGTTC 2250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24.30 TCAGAAGGTCTGCCAACACCAACAAAAATGACTCCAAGATGAAGAATTTTAGTATGAATT 2489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             642 ArgAspArgHisLeuAspGlnIleMetMet@ysSerMetTyrGlyIle@ysLysValLys 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 742 ProbenArgIleProstyGlyAsulleTyrileSerProbenLysSerProTyrtysile 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    842 LysPheGluGlnLysLeuAlaGluMetThrSerThrArgThrArgMetGlnLygGluLys 861
                                                                          542 LeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerProValArqSerProLyntys 561
                                                                                                                                                  562 LysGlySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGluAlaThrSerAla 581
                                                                                                                                                                                                                                                                                                602 ArqLeuAlaTyrLeuArqLeuAsnThrLeuCysGluArqLeuLeuSerGluHisProoMu 621
                                                                                                                                                                                                                                                                                                                                                                      622 LeugluHisilelleTrpThrLeuPheGluHisThrLeugluAsuGluTyrUluLeuMet 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         662 ASmileAspLeuLycPheLysIleIleValThrAlaTyrLysAspLeuFroHisAlaVal 681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           702 TyrAsnSorValPheMetGlnArdLeuLysThrAsnTleLeuGlnTyrAlaSerThrArd 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               722 ProProThrLeuSerProlleProHisIleProArgSerProTyrLysPheProSerSer 741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                762 SerGluGlyLouProThrProThrLysMet thrProArgSerArglleLeuwalSerIle 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                802 AspArqValLeuLysArqSerAlaGluGlySerAsnProProLysProLeuLysLysLeu 821
522 SertysAspArgGluGlyProthrAspHistenGluSerAlaCysProteuAsnLenPro 541
                                                                                                                                                                                                                        582_PheGlathridlatysProLeutysSerThriser Leuser Leublactyr LystysValtyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        822 ArgPheAspileGinGlySerAspGluAlaAspOlySertysHisLouProClyGluSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2730 ATGAATGATAGCATGGATACCTCAAACAAGGAAGAGAAA 2768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           862 Met AsnAspSerMet AspThrSerAsnLysGluGluLys 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .:
Jeb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                 5
                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                            G
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ^{\circ}_{\gamma}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ć
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
```

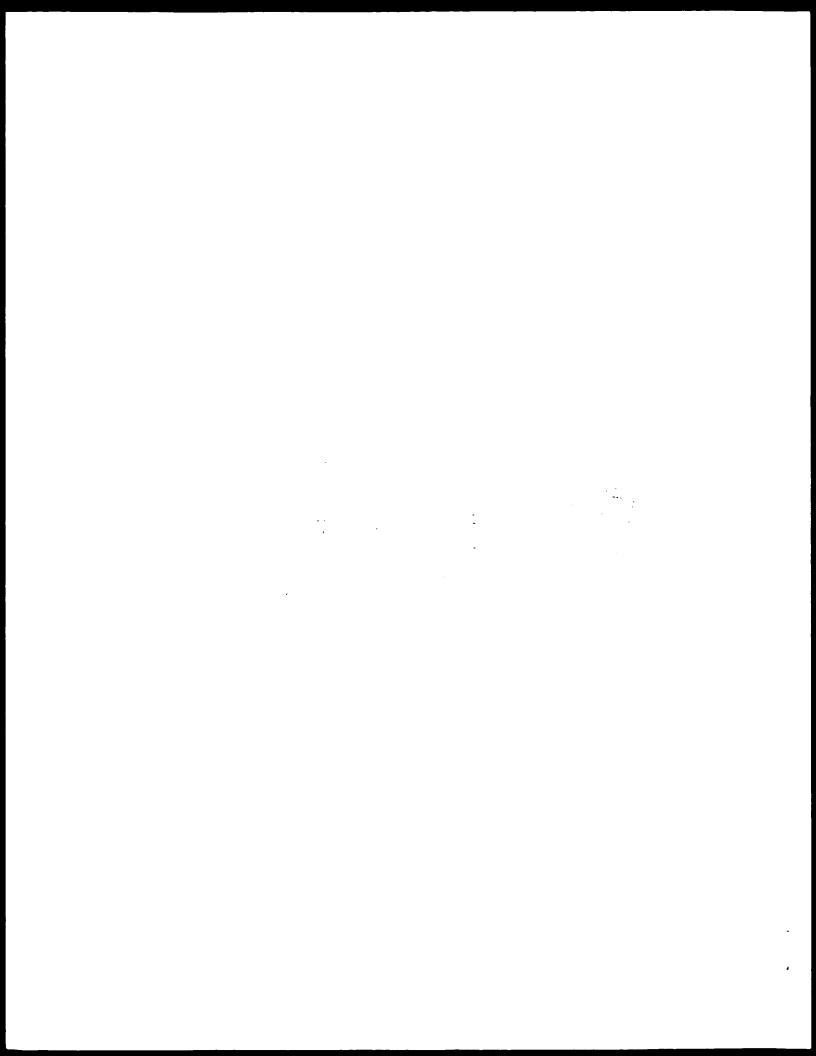
RESULT 15

							•					
EB 2000 ods for			9	4 9	4 9	54 06	4 9	4 0	4 10	34	6 4	4 9
18 FE		11 74 - C 66	st 94 - - -	7 11 7 18	a 13 - 13 A 24	- ~	's 17 + A 36	7 19 H 42	u 21 - A 48	C4 IC	rr 254 	m 27 T 66
PAT ।		Serva 	Alame CITAT	ArgTP AGGAC	SerA] 	31 nMc	i i e i.y I I I I I I ArritAA	AATIGG	LceC1	STuva HTTH SAGG1	Thrse ACATE	78A8
ر. د تا		ulle 	pAstu TAAT	uGlu. GGAA	eAsn: - - AAAT	Heu HHH AITA		SILE HHH CATT	SC1r 	CASP(AGAT	uVal' GI'A	ri.eu
linea	23.5	Tegl TITI	/alas TTGA	ysle AATT	luil - - AAAT	:1uva :AAGI	SPTY 	lerr WACC	1131.7 	Sn!! ATAL	llyte GACT	Lely HIII VIIIA
eua	 	sAsn] AAACA	r Lysy AAAc	eserl AGC#	rThro ACTO	SGLYC - - - - - - - - - - - - - - - - - - -	TreuA FILLI	Vall	H I I C	CC784 	rreuc 	26193 1111 AGAAA
DNA • es q	ative hes:	AspteuāspāluMetSerPheThrPheThrGluteuGlnLysāsnīleGlutleSerVal 14 5 15 1 4 H H H H H H H H H H H H H H H H H H	HISTYSTHEPhedsmicultyschultedspthtserththysvaldspasialamet 	Serargiculculystystyraspvallegbbealaleubheserlysleudluargthr 	CysululeurletyrLeurhidluProSerSerSerlleSerThrGlurleAsnSerAl.	Lebya Heulysya Escritp Hethreheleuleualalyse Eygluda Heughmet 	GTBASPASPICUVATTEGEFFÜRGTINLCBMCTLCBCYSVATLCBASPTYFPHCTTELY THITTETTETTETTETTETTTETTTTTTTTTTTTTTTTT	LeuserProProMot LeuLeuLysolufrofyrLysffkrAlavalIleFroIleAsnGl 	SOTPTOATGEBRE BANGELYCHASBASCTALAATGEGUSCTALAATGEGUSCHLACKEUU TELETELEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLEH HELLE TCACCTOBAACACOCARGOSARATCARAACTBRACATGEARSSBATASCAAACAACTAGA	ASHASPTERTG FLOTTOCHUVA ILOUGYSTYSCHUHTSCHOGYSASH FLOASPCHUVAL EFFELLET FLEH FLEH FLEH FLEH FLEH FLEH FLEH FLEH	Lysabbyallyribelysasobbellepropheme.Asoberleudlyleuvalthrber 1711-111111111111111111111111111111111	ASDG 17 COPTOGLUVALCLASOLOGGCLLYSAFGTYFGLUGLULLETYFLOULYSASON
		Theud TITII	SThrs HHHH FACCA	SATAT FILLI PGCAC	rserI CGA	LicuA TAG	TheuC IIIII SCTAT	TEYST IAAAA	JSCTA 	sCluH HHHH AGAAG	Met.A FELLI FATGA	sArgi VCGAI
S9122 edict essor apy Trs	Length: Matches Conserv Mismatc Indels: Gaps:	hrgli 	leAs ITGA	euPhe IIII rerr	erse 	helet ITTI	euMet AAT(rcT;; 	SnAte 	781.73 1 1 3 AAZ	roPho	er1.ys
t US 3 9 9 Hencesupport there there there	31 (PheT	G1u1 	Vall. CITAT	Pros CCCA	ThrP - - - ACAI	GINE IIII CAGT	SlaF GAAC	01nA 	1111 11111 111111111111111111111111111	TIPP	Spot 1111
atent 22919 22919 32) 32) nor s 9ene 6 A 1 70ual	se-305 1,00 00% 00% 44% AR072U	heThr ^An	outys FELLI FAAAA	/TASE	rrglu 	TP11e HHHH 3GATC	2A111	Pullys FEAAA	1461y 11111 3A447	111731 11111 14011	SaPho HHIII MITTE	MAAAT
om par 1:722 1:722 0 323 SX. Sor um sor um sor tion/ tion/ 413236 413236	. 35e-30 2213.00 00.00% .00.00% 3.54%	SerP}	heuld 	1.75°E3 AAGE4	LeuI! - - - TGAC	SerT1 	Hese HIII	LeuLe 	ArgAt i i Addor	11001 11111 ATTTG	Lysas HIII AAAA	V4193 11111 STTG2
1 fr 1 cd. 1 to 1 to Hu, ectrum press, S 59 1 cora	7 4 1 1 1 9 6 6 6 874)	uMet ⊟∃∃ SATG	cAsn TAAC	ulys IIII) GAAG	eTyr ATAT	sval AGTT	uval 	○ M 01 	rPro FILL ACCC	911c	rete 1117 1717	0019
2031 2031 2031 2031 345. 445. 45. 45. 45. 45. 45. 45. 45. 45.	ty: arity i (1-	NspG1	hePh	Partie	.e.i.i.i	cully TANA	Aspl.e	70Pr	ArgTh HILL SGAAC	Thrar IIIII ACAAG	/ally 	501I:
AR0720431 AR072031 AR072031 AR072031 Onknown. SM Unknown. Unclassified. I chases I to 3232 S X1, H. J., HU, S X. and Henedict, W Broad specificum tumor suppressor gene therapy L. Patent: 08 5912236 A 1 15 JCN 1997 I. Oncation/Onalitiers I. 1232 Angle A. A. Onganism-"unknown" II. 1232 Angle A. A. Onganism-"unknown" II. 1232 Angle A. Onganism-"unknown" Angle A. A. Onganism-"unknown"	Scores milarit Similarit h:	pteuz Lili CCIAC	styst TAAA]	rArdi III:I	861 41 111 1 10AA	11Va 11 	DASP/ FEEE	ESeri FIEL FICA	TPTO/ TITLE	nAspl GALA	SASEA STILL AAATO	ng 1 y 1 G65A0
1	ment Score No.: Similar Local Similar F Match:	u r-	75 H11 	35 Se 27 IC		45 Let 11 47 TT					un In	.c ト
A THE STATE OF THE		un-	r ~	, ,	115	I 4	155	175	195	487	2.42	456
ACOTS DOCUS DOCUS DOCUS VERSING VERSING VERSING SAUGE ORGAN PER PRI PER Aliana Producti Scores Percent Resilina Casery	ĝ ŝ	9 0 Y	5 3	3 1	95 145	5 5	S 8	5 5	92 3	ý ŝ	ਨੇ ਫ਼ੈ	

```
967 AAATTTGCTAAAGCTGTGGGACAGGTTGTGTGGGAAATTGGATCACAGGGATACAAAGTT 1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1507 GTGTAAGAIGTGGAAAAAAAAGGILCAAGIAGGGGGGTAAAIIGIAGIGGAAAIGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         395 GlyValArqLeuTyrTyrArqValMetGluSerMetLeuLysSerGluGluGludLeu 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               415 SeriloGlnAsnPhoSerLysLeuLeuAsnAspAsnIlePheNisMetSerLeuLeuAla 434
L; sAspLeuAspAlaAtgLeuFheLeuAspHisAspLysThrLeuGlnThrAspSerIle 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               475 TyrLysValileGluSerPhelleLysAlaGluGlyAsnLeuThrArqGluMetlleLys 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  555 ProValArgScrProtystystysClyScrThrThrArgValAsnScrThrAlaAsnAta 574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                355 ValAssProLysGluSerlleLeulysArqValLysAspilleGlyTyrileFkeLysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     775 //ys/baralar/ys/a/talalys/tas/baratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratalar/ys/aratala
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    575 GluThrGlnAlaThrSerAlaPheGlnThrGlnLysProLeuLysSerThrSerLeuSer
                                                                                                                                                         295 AspsorPheGluThrClnArgThrProArgLysSerAsnLeuAspGluGluValAsnVal
                                                                                                                                                                                                                                                                                                                           315 HeProProHisThrProValArgThrValMetAsmThrHeGInGInLouMetMetHe
                                                                                                                                                                                                                                                                                                                                                                                                       787 ATTCCTCCACACACICCAGTTAGGACTGTTATGAACACTATCCAACAATTAATGATGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             335 LeuAsuSerAlaSerAspGlnFroSerGluAsnLeuTleSerTyrPheAsnAsnCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .1387 FTAPTTGATCTTATTAAACAATCAAAGGACCGAGAAGGACCAACTGATGACCTTGAATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              515 LeuPheAspLeulleLysGlnSerLysAspArqGluGlyProThrAspHisLeuGluSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    535 AlaCysProLeuAsnLeuProLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            넌
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ά
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CP
CP
                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                   걾
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ā
```

444ValiantysAntserAladludiySerAsnpro 814 - [11] [11] [11] [11] [11] [11] [11] [11		Charach of yest about Arabaha diffeste a Aspanda in the Hillith of the Cyster Metabaga Arabaha Arabaha Hillith		
and the first transfer of the first transfer of the American Manager transfer of the first transfer of the American Manager transfer		HOLY FILLER TO SERVE AND THE SERVE THE SERVE AND THE SERVE	22H7 835 2347 2407 2407	5 8 5 8 5 8
		P. SCTAFGLICTCHVALSCETTOCHYGIUSCETPRODLY BETSCEGIULYSPACHINSTIC 	7.114	5 ŝ
775. Set Argille Legya Set Heelyg Discr Phedly Disser Chilys PheGlinys He Hill Hill Hill Hill Hill Hill Hill H		5° CoulysSorProTytLystDeSordiuGTyLorDruProThitysMotThiProArg TELLITETETETETETETETETETETETETETETETETET	210	5 ±
755 LeulysSerProTytLystleSerGluGlyLeuProThrPysMerThrProArg HELLELLEHTHHHHHHHHHHHHHHHHHHHHHHHHHHHHH		5. ProtyttysPheproSerBerProteuardTeProGlydtyasnTeTyrHeSerPro 1111 HTL HTLHTHHHHHHHHHHHHHHHHHHHHHHHH 7. CYLACAGUTECTAGUGAGCTAGGATECTGGAGGGAACATGTATTGAGGG	7 707	5 3
7.5 ProlytissPhebroSerScrProteuArdlebroGlyGlyAsniletyrileScrPro- 	734	5 DOUGHLIFFALLASON BY AND POPTODY CONSCIPTO HOP TO HELD HELLELLELLELLELLELLELLELLELLELLELLELLELL	7 3	5 E
715 LOUGHLITATALASET HATAGOTO DAT COUSCIPPO DE LEOPTOAGSET HELLE H		os Tyraspisor (10-110-Valible) yrasinsor ValibeMet Glinaro(LeniysThrasinle) 11111111111111111111111111111111111	\$ £	5 3
695 TyrAspSerTheTLEHTHTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT		²³ LiysasptantroffisalaVa1010010thrPhotysarqVa11cu11ctysQ10010610 111111111111111111111111111111		45 45
675 Dysaspleoup offisalava Dindluthi Phetysarqvalleouletysdindludillistic in it it is a construction of the intermining of the	674 1866	5 TYPCHYTTECYSESSYALLYSASOTTEASPLODYSPHOLYSTLETTEVATTALATITTETTTTTTTTTTTTTTTTTTTTTTTTTTTTT	÷ ±	5 43
655 1910 (110 CystysValtysAsorleAsptentysPhetysHelleValthralatyre Hill Hill Hill Hill Hill Hill Hill Hil	_	s stransfold yr stofolmer ar dasparaftisfæraspolfollemet met cyssermet i stiff i fittillet i tillet i fittillet i fittillet i tillet i fittill 7. paraatisasta i daagt patagagagagagat i tidagbaaatia i gargigtiggatig	1,4	50 AZ

Search completed; January 18, 2003, 22:15:50 Job time : 9888.01 sees



```
(without alignments)
6678.212 Million cell updates/sec
                                                                                                                           January 17, 2003, 18:15:29; Search time 4786,99 Seconds
                                                                                                                                                                                                                                                             ...TRMQKQKMNUSMUTSNKEER 869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4109280
copyright (c) 1993 - 2003 Compugen Etd.
                                                                                     nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                              2054640 seqs, 14551402878 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         lotal number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                           1 MPPKIPKIAAIAAAAABPF.....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                     Xqqpop 10.0 , Xqapext
                                                                                                                                                                                                                                                                                                                                                Yqapop lu.u , Yqapext
                                                                                                                                                                                                                                                                                                                                                               Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fost processing: Minimum Match 0%
Maximum Match 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DH seq length: 0
Maximum DH seq length: 200000000
                                                                                                                                                                                                              US 69-026-459A 47
4502
                                                                                                                                                                                                                                                                                                   HLOSUM62
                                                                                                                                                                                                                Little:
Perfect score:
                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                     M protein
                                                                                                                                                                                                                                                             Sectionness
                                                                                                                                                                                                                                                                                                                                                                                                                                Seat ched:
                                                                                                                               Butt on:
```

Maximum Match 100%
Listing first 45 summaries
Listing first 45 summaries
Listing first 45 summaries
Listing first 45 summaries
Listing first 45 summaries
Model framer planumodel bework
World firstle spanning to the spanning first 100 state 100 st

```
em, hum:*
                    db | in ; *
db | om ; *
db | ov ; *
                                             ab patt:

ab pit:

ab pit:

*:rada
                                                                                                        qb vi;*
cm ba:*
                                                                                                                        *: IIII
                                                                                                                                                                            em pat:*
       qb_ba:*
qb_htq:*
                                                                                   qb sts:*
                                                                                                                                              € III. IIIч.: •
                                                                           4b ros*
                                                                                          qb sy:*
                                                                                                                                                             *: 10 mo
                                                                                                                                                                    • 1.40 Jan
GenEmbl: *
                                                                                                                                                                                   ĒĒ
                                                                                                                        Ē
                                                                                                  ÷
but abase :
```

em_vi:* em_htq_hum:*	em_htg_inv:* em_htg_other:*	em_htq_mus:*	cm_btq_rod:*	em_htg_mam:*	em_htqvrt:*	em_sy:*	em_htgo_hum:*	em_htqo_mus:*	em_htao_other:*
29:	31:	 T. R	35:	36:	17:	. 88:	36:	40:	41:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		æ				
Result		Query				
. S	Score	Match	Match Length DB	DB.	el el	beser iption
-	4454.5	5.85	2994	9	AR091965	AR091965 Sequence
~		5.85 85	2494	ç	AR098189	AR09B189 Sequence
~		6.86	2994	φ	AR207831	AR207841 Sequence
4	54	6.86	5667	40	BD009728	BOOO9728 Tissue sp
ن ،	4454.5	6.86 6.86	5994	٠ ۍ	181465	181465 Sequence 2
اعد			2994	Ť	HUMRESA	M28419 Human retin
_			4600	5	HUMRRAIRA	M34647 Human retin
x	4454.5	6.86	4839	9	AX 3 30 7 0 1	AX 140701 Sequence
2		6.86	4839	J	HUMRHIMKNA	L41870 Homo sapien
10	4444.5		2995	9	AR144797	AR144797 Sequence
Ξ	4406.5	97.9	4740	ō	HUMRES	M15400 Human retin
	41.4		4	ت	105311	165411 Sequence 1
~	CL1	97.5	4547	9	ñ9860:	109369 Sequence 1
14	4309 5		4580	٠	A01444	A01444 H.Sapiens D
7.5	4057	8.08	1561	s)	E12560	
16	4059	90.2	4591	10	MUSPP105RB	M26491 Mouse retin
	3658	E	26.44	10	KATRF	Dallas Kartus mony
8.	3870.5	86.0	3232	φ	AR072041	
c 19	3870.5		3232	ų)	AR072032	AR972932 Sequence
50	3870.5	86.0	1232		118496	138496 Sequence 1
c 21	3870.5		1232		118497	118492 Sequence 2
22	3180.5		4541		CDRETINE	X72218 G.domesticu
5.3	3175.5	70.	*456	ro.	000113	Unmilt Gallus qall
77	80 80 81	* : S: :	7 10 11 11	7	AF230742	AF240742 Canis lam
<u> </u>	11 20 21 21	56.9	200 200 200 200 200 200 200 200 200 200	۱, ۳	NVRICTINEE	YOULZE M. Viridesce
40 f 04 f	7652	53.5	3.886	u^ 1	AF10286.1	AFT02861 Oncorbytic
ni e	2156.5	6.7	2) ; 2) ;	π, Ι	AY008289	AYCCBING OTYZIAS 1
30 C	101	20 6 04 5 04 6	# C	en s	AY125075	
67	7.56.5	æ. c	4.00 4.00 4.00 4.00	۰ ع	AR038697	
25	7.00.3	æ :	4 0 0 0	e :	AKU59584	ARUSSSA Sequence
- 2	7.00.7	E 0	7 CO 7	ם ת	HSP1 50K	X/6061 H.Sapiens p
× ~	75.1	16.7	10 P P P	n 0	D. 034430	19 034430 HOMO SAPT
**	749.5	16.6	2.5	. =	MMI14420	HAAAA Mus musculu
* 2°	747	16.6	1960	•	HUMP10713	L14812 Homan retin
36	747	16.6	4861	10	MMU27177	U27177 Mus musculu
3.7	746	16.6	4130	ç	AX281827	AXZ81827 Sequence
38	729	16.2	4514	0.	MMIJ47 + + +	U47444 Mus muscula
±.	726.5	16.1	3304	÷	BC032247	ECONZANT HOMO Sapi
	724.5	16.1	2808	÷	HUMP107A	M74%47 H.Sapiens r
	719.5	16.0	2808	ď.	AR078225	AR078225 Sequence
₹	703	15.6	4872	<u> </u>	BC020528	BCC20528 Mas masca
~	702	15.6	4013	10	MMU50850	
44	701	15.6	4861	=	15556.27	
ų			1000	40.0	7	

ALIGNMENTS

RESULT 1

- S RP -		20 198 40 258	60 318 80 378	100 438 120 498	140 558 160 618	180 678 181 738 181 798
PA: 08		aGlupro 1111111 166AACCC YProGlu 111111	nralaLeu 	ulrpGly GrGGGGA 	eAspThr GATACC 	Free Ser Ser HIIIIII BOARTES FREE FREE FREE FREE FREE FREE FREE FR
linear	2004 867 11 5.9	Met Protrotys Thr Prodrytys Thralada Thralada ad ladiada ad ladiupro HTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	AspleouProleouvalargleouGlupheGluGlurhrGluGluproAspPherhralaleoullilililililililililililililililililil	ValserservaldapGlyvalLeuslystyrtlathlijiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	GINLYSASNITEGTULLESCTVATHISLYSPHEPNEASNILEULAULYSGTUTTEASPTHT [[[[]]]][[[]]][[]][[]][[]][[]][[]][[]]	LeapheSertysLeaGlaArgThrCysGluLeaThrGhnProSerSerSerSerTillililililililililililililililililili
DNA SSOT and	h. ees: rrvative: ttches: s.		GluGlubr (GAAGAACC (ArgAlatr (AlfAlli)	631nL;sL; [111111] CaaaaGaa MetSerPh 111111	ASN1.eul.e 	Tyrteuthr
bp 18134 1997 -	Length: Matches Conserve Mismatc' Indols: Gaps: (1-2994)	AlaAlaThr SCCCCACC 31uGluASE	31uG1uThr 3AAGAAACP 9A1ArgG1u 11111111	31,7,7,116 361741411 361741411 4cuAspGlu 11111111	.ysPhephe 	Sloteuthety SAACTTATATA SACTTATATA STGCTAAAAGT STGCTAAAAGT
2994 patent, US 599 0018719 994) e.E.YH.P. enc-cancer st 34-A 4 07-117 70uallifers 4 sm-"unknown" c 594 q	2 1965	rgLysThra HTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	euGlupheG TGAGTTTC OASPHISV HHIIII	#1LeuslyS 11111 ATTOCCAC aValAsp 	prvalhisi 	GThrcyscl 1111111 GACATGTGA TTGCATTGGT
4 from patent. 1 GI:1001871 i.ed 2 and Lee, E.Y. astoma gene-ca 35 5988184-A 4 10.00041007/0481 1.2994 /organism_un	9.84e-31 4454.50 93.53% 93.43% 98.44% 6 6 XR09	SThrProAt MACCCCCC ProProPt	17 1 1 1 1 1 1 1 1 1	AspGlyV3 	GATATICSC (IIIIIIIII GAAATCAC ASPASDAI IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	ysteugluar [1]]]]]]]]]]]] AATTGGAAAG AAATAAATTG
AR091965 AR091966 AR091965 AR091965 Inclassit Unclassit I (bases Lee, WH. Patcht: U	: ty: arity 7 (1-	TOPFOLYS HILLIII CGGCCAAA Mabrobro	euProfee 	Serserval SALCHOLL VSTOPPIC (GIAICITI	ysasnile 	PicSerigs HILLITI TCAGCAAA CTACTGAA
E E E E E E E E E E E E E E E E E E E	Scores imilari Simil ch:			Val: 	CAGA SerT	LeuP 1111 CTCT CTCT Met- ::: AFAID GCLA
ARCOLOS COCO	ment (No. : 2) State Single Matel	139 12 199	25.9 6.1 6.1 6.1	81 379 101 439	121 444 141 558	161 619 181 679 181 739
ARROY LEGON LEGON ARROY SEGON SEGON OR AUT AUT AUT AUT AUT AUT AUT AUT AUT AUT	Aliqui Pred. Score Perce Perce Best. Unery Users	3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	5 1 5 1	6 f 8 fa	5 2 5 2	5 6 5 6 5

ΟŸ	181		181
qq	799	TGTGTGCTTGACTATTTATTAAAGTGTGAGGGGGATGFFGGCGAAAGAAGGACGATATAAA	858
9. dd.	182 859	ValAlaVallieProlleAsnGlySerProArqThrProArqGlyGlnAsnArgSer 	201
oy.	202	202 Alaangilpalatyasibbe.gi.ashaspihkanatleitediuValkenSyolyssib 221 	221
97.	555	Hisolucysasnicaspoluvailysasnvaityrehelysasnpheileptorbemet	241
Db			1038
27	242	AsnSertovilytouValThrserasndlyteuProdlavaldladsuteu3ertysarg	261
	1039		1098
57.	262	Tyrolugluihetyriculysasolysaspledaspalaarsieufheleuasphisasp	281
DP	1099		1158
O.;.	282 1159	Lysthrigugtetterspectterspectterstatigenspectterstatigen generalisetter in terminer in ter	301 1218
Qy	302	AsnieuaspāluāluvalasnvalileProproHisthrProvalargthrvalmetasn	321
Db			1278
Qy	322	ThrileGinCinteuMetMetileLeuAsnSerAlaSerAspGinFroSerGluAsnLeu	341
Db			1338
oy.			361 1398
oy Ob		ASPITECT 7TY FILEPHELYS GLUEYS PROALSELYS ALAVAIGT 7G1FGLYGFS VAIGHT GATTHELY HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH HILLIH GATATAGGATAGAT CTTTAAAGAGAT 1G1 G1 GGAA	381 1458
o o	382	TIPOLYSPECTSARGTYTLYSLEGGLYVALAKELEJTYTTYTATGVALMOLGLUSETMOL	401
	1459		1518
Oy	402	Leulyssercluclucluargleuserileclnasseheserlysleulguasnaspasn	421
Db			1578
Qy Dp		IlePhoHisMetSerLeuLeuLeuAlaCysAlaLeuGluValValWetAlaThrTyrSerArd	441 1638
o o o	442 1639	SetThtSetGlaAsnLouAspSetGlyThtAspLeuSetPhePtoTtpTleLeuAsuVal 	461 1698
0 <i>y</i>	462	.cuasn.culysalarkcaspphc?yriysValHedluStrhedlelysaladludty	481
Db	1699		1758
QY	482	Assienthrangglume: IlelysHistengluargcysGluffisarg1leMetGluser	501
Op	1759		1818
50 S	502	HellaTrpLeuSerAspSerProJeuPheAspLeuTleLySGluSerLysAspArqGluSerCysAspArqGluSerCysAspArqGluSerCysAspArqGluSerCysAspArqGluSerCysAspArqSqluserCy	521
oy	1819	CITOCATIONCICECAMBETICACCITIATITIANICITATIANGANICAMICAMINAMA GARANA GIAPITATIAN GIAPITAMA GIAPIT	1878
Oy	122		541

136	1879	GGNYCACTGACTTGAATGTGGTGGCTCTTAATGTTCTTCTCTCCAGAATAATCA 1938	
5 G	542	The Aladia Aspmenty newser provatar gentrolysisystystystys 1561 (111111111111111111111111111111111	
A 42	56.2	ArqValAsoSerThrAlaAsaAlaGluThrGlnAlaThrSerAlaPheGlnThrGlnLys 581 	
S 3	582 2059	ProfoulysserThriberLauserfoutheTyrLysLysValTyrArgLeuAlaTyrLeu 601 	
77 195	602 2119	Ardrobanthrieuryschaatglebileuserchaftsprobheisenblinteile 621 Heffilffilffilffilffilffilffilffilffilffi	
S 3	622	TrpThrLeughwilnHisThrLeuglnAsnGluTyrGluLeuMetArgAspArgHisLeu 641 	
45 45	64.2	ASPGHIJLEMETMET CYGSOCMETTY CHYTHEYSTYSTALLYSASH I FOASPLEULYG 561 	
ey Tob	2293	Phetystlettevalthralafyrlysaspleubrodisalavaldinsluthrphetys 681 	
	682 2359	ArdValLeufletysGluthatolufyrAspSerfletLeValPheTyrAsnSerValPhe 701 FEELELELEHTELELELELELELELELELELETTELETTE	
5 di	702	MetGluarqLeuLysTbrasnIleLeuGlnTyralaSerTbrayProProTbrLeuSer 721 	
5 3	722	Profletion is the troat distributy by by proserve role and file 1911 CAATA CONTROL AT THE FILE OF A STREET CONTROL AT THE FILE OF A STREET CONTROL AND A STREET CONTROL AND A STREET CONTROL AND A STREET CONTROL AND A STREET CONTROL AND A STREET AND A STREET CONTROL AND A STREET	
5 %	74.2	OLYCHYRACH LETYT HESEFPOLECHLYSSEFPOLYFLYS HESEFOLIOCHYLEUPFO 761 HELLITH HELLITH HELLITH HELLITH HELLITH HELLITH HELLITH HELLITH ODAOGAACAFOLALATH CACCOCIGAACACCATATAAAN FICACAACTICICCA 2598	
5 d	762	ThrefothriysmettheroardseragileleuvalserilediydluserPheGly 781 	
5 =	782	ThrserdlubysPhedlubysHeasnGinmetvalCysasnseraspargvalicubys 801 -	
5 €	H02	ArtBeraludieligiserasibretssijsbrodesdjadjoloanapheaspilegia 821 Hillililililililililililililililililili	
5 ŝ	822 2779	1y314Sertysphed1gSInE HTHILLIHHHHHHHHH GAGAGTQCAAATTCAGCAGA	
5 3	H42 2839	Legial action of the Set thratigibrate Medicings of integrated as in a spectrum of the Control o	
5 3	H6.2 2899	Asp thr Ser Asnitys dinitys -869 FITTER FER FER FER FER FER FER FER FER FER F	
RESULT AROTHE	II.T 2 #818%		

```
PAT 14 FEB 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    101 IleCysllePhelleAlaAlaValAspLeuAspGluMetSerPheThrPheThrGluLeu 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 GIntysAsnileGluileSerValHisLysPhePheAsnicutentysGluileAspibr 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              [4] SerThrLysValAspAsnAlaMetSerArgLeuLeuLysLysTyrAspValLeuPheAla 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161 LeuPheSerLysLeuGluArqThrCysGluLeuIleTyrLeuThrClnProSerSer 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHTHILLIHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                679 ATATCTACTGAAATAAATTGTGGATTGGTGGTAAAAGTTTGTTGGATGACATTTTTATTA 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 739 GCTAAAGGGGAAGTATTACAAATGGAAGALGALGGALGALTIGALTIGAAGTIAALGA 798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -: 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MetProProLysThrProArqLysThrAlaAlaIhrAlaAlaAlaAlaAlaAlaGluPro 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21 ProAlaProProProProProProGluGluAspProGluGlnAspSerGlyProGlu 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 CysClnLysLeuLysTleProAspRisValArqGlnArqAlaTrpLeuThrTrpMlnLys
      Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
Mismatches:
                                                                                                                                                                                                                                                     1 (bases 1 to 2994)
Antelman, D., Gragory, E.J. and Wills, K.N.
Retinoblastoma tusion polypoptides
Patent: US 6074850-A 3 14-JUN-2000;
         VN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
AKUMBIB9 2994 bp
Sequence 3 from patent US 6074850,
Abduston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US:09:026-459A-47 (1-869) x AR098189 (1-2994)
                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                594 q
                                                                                            AR098189.1 GI:12807446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9.84e-312
4454.50
93.538
93.438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                618 C
                                                                                                                                                                                                                                                                                                                                                                                                                     .2994
                                                                                                                                                                                         Unclassitied.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             974 a
                                                                     AR098189
                                                                                                                                                               Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                     Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                 DEFINITION
                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No.:
                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRICIN
                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>0</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ^{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \widehat{\mathbf{q}}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ć
```

																	٠	•
in o	918	221	241 1038	261 1098	281 1158	301	321 1278	341 1338	361 1398	381 1458	401	421 1578	441 1638	461 1698	481 1758	501	521 1878	547
FUTCT COLD GACTA FITTATTAAACTCTCACCTCCCATGTTGCTCAAAGAACCATATAA	ACA	A BARTELLE III III III III III III III III III	HisgludysAsnileAspGluVallysAsnValtyrPhdiysAsnPhdileProtheMet 	AsnSerteudtyteuValThrSerAsnGlyteuProGluValGluAsnteuSertysArg - -	TyrGluGluffellyrfædiysAsniysAspiædAspAlaArgtædPhetædAspHisAsp 	Lysthricad inthraspscilleaspsciPhediuthidliatgthritioarglyssor 	AsnLeudspüluGluValAsnValIleProProHisThrProValArgThrValMetAsn 	The Healing Intermetwet Helegasisseralsseraspointproserchasined HILLITHTHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH	LeSerTyrthcAsnAsnCysThrValAsnProLysGTUSerTLeLeuLysArgValLys 	AspileglytyrilePh6LycGluLysPheAlalysAlaValGlyGluGlyCysValGlu 	PECTYSErCIDAE9TYPE, SECULYVA LANGUTYFTYRATGVALMCTELUSEMET THEFFELLITH FELLITH	Fort yeserching to and colser the Glass pheser by Steutzeusschaspasin 11111111111111111111111111111111111	ILEPhefilsmetSerLeuLeuAlaCysAlaLeuGluValValMetAlaThrTyrSerArg 	Set thi Set Chrashleuaspset ClythrasplæuserPhæpietip Heliellill 	Leuasnicui ysalapheaspPhetyriysVali LeGiuSerbbel leiysAlagiudiy 	AsoleothrargolometilelysHisleogloargysgloumsargilemetoloser 	teualatrpieuseraspserproteupheaspleutletyschigsaspargchuttittittittittittittittittittittitte 	Olythochtraspilistendlaseraladyserotenastatenglolendlasnasnilis TITITITITITITITITITITITITITITITITITITI
2. v. c. a.			222	24.2	26.2	282	302	142	3.839	791	382 1459	405 405	422	442	462	482	502	n. c1
a 3	s e	S S	25 3	§ 8	5 £	5 2	§ §	\$ £	5 3	\$ ± €	ਨੇ ਤੇ	한 용	ģ <u>\$</u>	5 3	5 8	5 =	6. 6. 6.	55

```
2059 CCATTGAAATCTACTCTCTTTCACTGTTTTATAAAAAGTGTATGGGCTAGCCTATGTC 2118
1879 GGACCAACTGGATCATGGTTGTGCTTTAATCTTCTTCCTCCAGAATAALCAC 1938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2239 GACCAAATTATGATGTGCGTGCATGTAYGCCATATGCAAAGTGAAGAAYATAGACCTTAAA 2298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             582 ProfesilysserThrSerLeaSerLeuBheTyrLysLysValTyrArqLeuAlaTyrLeu 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  602 ArgLeuAsnThrLeuCysGluArgLeuLeuSerGluHisProGluLeuGluHisHleHle 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    622 FrpThrLoupheClnHisThrLeuGlnAsnGluTyrGluLeuMetArgAspArgHisLeu 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     682 ArgValleuthetysGluGluGluBjuTyrAspSerTlethevalPhetyrAsnSerValPhe 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              642 AspGlnIleMetMetCysSerMetTyrGlyIleCysLysValLysAsulleAspLeuL, 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              662 PhelysilelleValThrAlaTyrLysAspLeuProHisAlaValGlnGluThrPheLys 681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         722 ProlleProHisileProArqSerProTyrLysPheProSerSerProLeuArq11ePro 741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   802 ArgSerAlaGluGlySerAsnPrePrelysProLeutysLysLeuArgPheAsplleGlu 821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   822 GlySerAspGluAlaAspGlySerLysHisLeuProGlyGluSerLysPheGlnGluLys 841
                                                                                                                                                                                                                           562 ArgValAsnSerThrAlaAsnAlaGluThrGluAldThrSerAlaPhcGluThrGluLys
                                                                                                                                                                                                                                                                   211.9 GGGTAAATACACITTGTGAGGCTTCTGAGGACAGAAATAGAAACATATCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2359 CGTGTTTTGATCAAAGAAGAGGGGTATGATTCTATTATAGTATTCTATAACTCGGTCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     702 MetGlnArqLeuLysThrAsmIleLeuGlnTyrAlaSerThrArgFroFroThrLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            782 ThrSerGluLysPheGlnLysIleAsnGlnMetValCysAsnSerAspArqValLeuLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2719 AGANTES GANGGANG AND THE HELLELLE HELLELLE HELLELLE HELLELLE HELLELLE HELLELLE HELLELLE HELLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          842 LeuAlaGluMetThrScrThrArgThrArgMetGlnLysGlnLysMetAsnAspSerMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2899 GATACOTOAAACAAGGAAGAAA 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              862 AspThrSerAsnLysCluCluLys 869
                                                                                                                                                   DF
                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                   â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  급
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Op
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           감
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
```

Linear PAT 20-JUN-2002

NA.

2994 bp

AR207831

RESULT 3 AR207831 LOCHS

qq

141 SerThrfysValAspAsnAlaMetSerArqLeuLeuLysf.ysTyrAspValLeuPheAla 160 559 AGTACCAAAGTTGATAATGCTATGTGAGAGTGTTGAAGAAGTATGATGTGTGGA 618 [64] LemPheSerLysLeuGluArqThrCysGluLeuIlleTyrLeuThrGluProSerSerSer 180 81 ValserserValAspGlyValLeaGlyGlyTyrfleClnLysLysClaLeuTrpGly 100 101 IleCysilePhelleAlaAlaValAspLeuAspGluMetSerPheThrPheThrGluLeu 120 499 CAGAAAAAAAAAAAAAAAAACHAAAAATTGITITAAGITAAAAAAATIGAIAGC 558 259 GACCTGCCTCTCGTCAGGCTTGAGTTTGAAGAAACAGAAGCTGATTTTACTGCATTA 318 439 ATCTSTATCTTTALTGCAGGAGTTGACCTAGATGAGAIGTCGTTCACTTTTACTGAGCTA 498 679 ATATCTACTGAAATAAATTCTGCATTGCTGCTAAAAGTTTCTTGGATCACATTTTATTA 738 739 BYLAAABBOBAABFAFIAMAAHBBAABATBATBIBBIBTBEAHTFEAHTFEAHTAAFEETA 798 1 MotProprolysThrProArqEysThrAlaAlaThrAlaAlaAlaAlaAlaAlaGluPro 20 21 ProAlaProProProProProGluGluAspProGluGlnAspSerGlyProGlu 40 41 AspleuProLeuValArqLeuGluPheGluGluThrGluGluProAspPheThrAlaLeu 60 61 CysclnLysteutystleProAspHisValArgGluArqAlaTrpLeuThrTrpGlutys Conservative: Mismatches: 1 (bases 1 to 2994) Antelman, 5, Gregory, R.J. and Wills, K.N. Ret inoblastoma fusion proteins Tatent: UP 4294, 2 A 2 29 APP 2902, Long'E. Matches: Inde is: Sequence (from patent US 6379927. AR207831 0S 09 026 459A 42 (1:869) x AR207831 (1:2994) Gaps: Location/Qualitiers /organism-"unknown" 594 a AR207841.1 01:21507687 9.84+ 412 4454.50 94.548 518 93.48 2994 Unclassitied 974 a Best Local Similarity: ilnknown. Juknown Percent Similarity: Aliqument Scores: E W Ouerry Mateh: SOUTOR ORGANISM NELLINITES ACCESSION VERSION HASE COUNT FURNAL Fred. No.: REFERENCE AUTHORS Ξ KEYWORDS FEATURES X SHIRTE Š ŝ Š 3 ŝ 3 5 ŝ 3 Ξ 5 Ė ~ ÷ 3 â 5 = 5

```
1458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  219 AACCTTGA FGAAGGGGAATGTAAT FCCTCCACACACT FCTAGGGATTGTAGGATTTTTA FGAATTTTA GAATTTA FGAATTTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FGAATTA FG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1699 CITAATTIAAAAGCCITIGATITITIACAAAGTGAIGAGTITIAFCAAAGGCC 1758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            759 AACTIGACAAGAGAAATGATAAAAACATTTAGAACGATGTGAAGATCGAAATCATGGAATCC 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        979 CATGAATGTAATATAGATGAGGGGAAAAATGTTTATTTCAAAAATTTTAACTTTTATG 1038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1159 AAAACTCTTGAGACTGATTCTATAGAGATTTTGAAACAGAGAACACCGCGCGGAAAAAAGT 1218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               279 ACTATICCAACAATTAATGATGATTTTAAATTCAGCAAGTGATCAACAACAAAAAATTTG 1438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      459 ATTGGATCACACCCATACAACITCGGGTTCGCTTGTATTACCGAGTAATGCAATCCATG 1518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   € 0.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     382 11e3lySerGlnArqTyrLysLeuGlyValArqLedTyrTyrArqValMetGluserMet 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       442 SerThrSerGlnAsnLeuAspSerGlyThrAspLeuSerPheProTrplleLeuAsnVal 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             462 LeuAsnLeui,ysAlapheAspPhelyrt,ysVallieGiuSerPhellet;ysAlachuGly 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       402 tontyssorgingludluarqfonsorfledluasoPhesertystentonasnaspasn 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     422 IlePheHisMetSerLeuLeuLacysAlaLeuGluValValMetAlaThriyrserArg 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         502 LeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysGluSerLysAspArqGlu 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   522 GlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuProLeuGluAsnAsnHis 541
919 GCACGGATAGCAAAACAACTAGAAAATGATAGAAAATITATTGAAGTLICTMTGTAAAGAA 978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               242 AshSert.cuGlyt.cuValibrSerAshGlyt.cuProGluValGluAsht.cuSert.ysArq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     362 AspileClyTyrilePhetysClutysPheAlaLysAlaValGlytIntHyrysValGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        202 AlaArqIleAlaLysGlnLeuGluAsnAspThrArqIleIleGluValLeufysLysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       322 ThrileGinGinLeuMetMetIleLeuAsnSerAlasserAspGinProSerGluAsnLeu
                                                                             859 ACAGCTGTTATACCCATTAATGGTTCACCTCGAACACCCAGGCGAGGTCAGAACACAGA
                                                                                                                                                                                                                                                                                                                                                                                         222 His Stuffs Astrife Aspeluvaligs Astrvalization as Astrophomet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   282 TysThrLeuGInThrAspSerTLeAspSerFbeGluTh1GInA14ThrPt.Ar4LysSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 342 HeSerTyrPheAsnAsnCysThrValAsnProLysCluSerHeLcuLysArqValLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       482 AsnieuThrangCluMetileLysHislædCluArgCysCluHisArglleMetilluSer
                                                                                                                                                                                                                                                                           ें
                                                                                                                                                          3
                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                            <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ġ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <del>С</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ੰ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
```

```
41.3 3.360TAAATACACTTTGGGAAGGCTTGTGGTGGGGGGGGGAAAAATAGAAAAAAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2539 GGAGGGAACATCTATATTTCACCCCTGAAGAGTCCATATAAAATTTCAGAAGGTCTGCGA 2598
                                                                                                                                                                                                                                                                                                                          642 AspGinileMetMetCysSerMeTTyrGlyileCysLysValLysAsnileAspLeuLys 661
542 ThralaAlaAspMctTyrLeuSerProValArgSerProLysLysClySerThrThr 561
                                                                                                                            582 ProLeuLysSerThrSerLeuSerLeuPheTyrLysLysValTyrArqLeuAlaTyrLeu 601
                                                                                                                                                                                            602 ArqLouAshThrLouCysGluArqLouLouSerGluHisProGluLouGluHisTle11e 621
                                                                                                                                                                                                                                                            6.22 TrpThrLeuPheClnHisThrLeuGlnAsnGluTyrGluLeuMetArgAspArgHisLeu 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                          682 ArgvalleutteigsclucteityrAspSertfelleValtheTyrAsmSerValPhe 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         742 MetaluaraLeaLysThrAsnIleLeaGlnTyrAlaSerThrArqProProThrLeaSer 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         742 GlyGlyAsn11eTyt11eSerPreleufysSerProTyrLysHeSerGluGlyLeufro 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       762 ThrProThrLysMetThrProArgSerArgIleLeuValSerIleGlyGluSerPheGly 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      782 ThrSerGluLysPheGlnLysTleAsnGlnMetValCysAsnSerAspArgValLeuLys 801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         802 AtgSetAlaCluClySetAsnPtoProLysProLealysLysLeuArgPheAsp11eGlu 821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         822 GlySerAspGluAlaAspGlySerLysHisLeuProGlyGluSerLysPheGinGlnLys 841
                                                              562 ArgValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAlaPheGlnThrGlnLys
                                                                                                                                                                                                                                                                                                                                                2899 GATACHUHHHHHHHHH 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       862 Aspib: SerAsniysGluGlubys 869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 4
BD009728
                           \tilde{\Xi}
                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>=</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
```

Design that the control of the contr

вропалав

30.55E

Y ≃

3994 bp

```
PR 15-NOV 1996 US OR,775151 (4-FFE 1997 US SA,901002 PI DOUGLOS ANTELMAN, RICHARD J GRESORY, KENNETH W WILLS PC CO7H31/04,705476/06,04818/96/06, AC:18/35/12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10) !!cCysflethefleAlaAlaValAspLeuAspGi_AMctScrPhcfhrPhcfhrGluLcu 12U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 GlnLysAsnileGluIleSerValHisLysPhePheAsaLeuLeaLysGluIleAspThr 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361 LouPheSert/#st.cuCluAr#ThrC#sGlat.culleTyrt.euThrGln:0.oscrSerSer 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        319 IGICAGAAATTAAAGATACCAGATCATGTGAGAGAGAGGGTTGGITAACTIGGGAGAAA 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21 ProAlaProProProProProProGluGluAspProGluGlnAspSerGlyProGlu 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 Met.ProProLysThrProArgLysThrAlaAlaThrAlaAlaAlaAlaAlaAlaAlaGluPro 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4] AspleuProLeuValArgLeuGluPheGluGluThrGluGluProAspPheThrAlaLeu 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 CysGlnLysLeuLysIleFroAspHisValArqGluArqAlaTrpLeuThrTrpGluLys 80
                                                                                                      Antelman,D., Gregory,K.J. and Wilis,K.N.
Tissue specific expression of retinoblastoma protein
Patent: JP 2001503638-A 2 21-MAR-2001;
                                                                                                                                                                                                                                                                                                                                    /organism-'Unidentified'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                         Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
                                                                                                                                                                                                                                                                                                                                                                            /organism-"unidentified"
/db_xrel-"taxon:32644"
1 618 c 593 q 809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-04-026-459A-47 (1 859) x 80000728 (1 2994)
                                                                                                                                                                              JP 2001503638-A/2
21-MAR 2001
13-NOV-1997 JP 1998522958
                                                                                                                                                                                                                                                                                                                 2994
                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
           HDÖNG728 1 CI-18638101
JP 2001503638-A/2.
                                                                                                                                                                                                                                                                                          Topology: Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9.84c 312
                                                                                         (bases 1 to 2994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4454.50
93.53%
93.43%
98.94%
                                                                                                                                                                                                                                                                                                                                                                 .2994
                                                                                                                                                                 Unidentified
                                           unidentitied.
                                                            unidentilied
                                                                           unclassified
                                                                                                                                                                                                                                                                                                                       sonrce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity.
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                          974 a
                                                                                                                                                   CANJI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                         SSELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
                                                                                                                                                                                                                                                                                                                                                                  SOUTCE
                                                       ORGANISM
                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No.:
              VERSION
KEYWORDS
ACCESSION
                                                                                                                                    PUBLICATION
                                                                                                                                                                                                                                                                                                                                                 · PEATURES
                                                                                                                    TITLE
                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ó
```

ą	613	TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	678
ž.	Т Н П	Med.	181
ā	67.9	THE ATAINGAATAAATICTGAATICGAAAAATITGTTGAAAATTTTTATTA	7 48
7.7	Ξ		181
ā	7.49	GCTAAAAGGGGAAGTATTACAAATGGAAGATGATGTGGGGATTTCATTTCAGTTAATGCTA	798
<u>}</u>	$\overline{\Xi}$		181
á	6,6,7	TGF5FCCTTGACTATETTATAAACTGTGACCTGCCATGTTGCTCAAAGAAGAACATATAAA	828
<u> </u>	182	ValAtaVall1-Prof1-AsuG1ySerProArgThrProArgArgG1yG1nAsnArgSer 	201
.		ALAATATTAATATTAATTAATTAATTAATTAATTAATTA	ν Σ
, ₄	5 5	GENERAL HELLER H	978
7. à	577	HESCHPYSASELLEASPCHUVALGSASNVALGTPECLYSASNIPELEITHILL FILLHILLHILLHILLHILLHILLHILLHILLHILLHILL	241 1038
÷ ÷	24.2	AspSerLevolyGewValThrSerAspOlyLevBroGluValGluAspLeuSerLysArg	
ã	10.5	AATTETETTUGAETTUGTAACATETAATGGACTTCCAGAGGTTGAAAATGTTTGTAAAGGA	1098
Σ, á	262	Tyrchichertyrloutysasniysaspiouaspalaargicubheleuasphisasp 	281 1158
7. ž	282	LysThrieuGinthraspsertLeaspserPheGlüthrGinargthrProargiysSer 	301
× 5	202	AsoLeorAspelludiuValAsoVallleProProHisThrProValArdThrValMetAso 	
<u></u>	771	ThrilledingintenmetmetfleteuAsnSerAlaSerAspGinProSerGluAsnLeu 	
÷	1279	ACTATOCAACAAITAATGAIGAIGATTTTAAATTCAGCAAGTGATCAACCTTCAGAAAATCTG	1338
لآ غ	142	The Sortyre beast a sury sthroat Astropologists it the Leuty sarge at Light IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	361 1398
74	16.2	Aspiledlytyrilethetsstatisfbealalysalatatittillillillillillillillillillillillill	381 1458
<u>.</u> 4	1450	How year of bard fyrthys touch you have the standard with the standard was a second and the standard was a second was a second and the standard was a second was a sec	
<u> </u>	402	4.0) Attending and Control of the Co	
<u> </u>	· ·	CTTAAATCACAAAAAACGATTATCAAAATTTTAGCAAACTTCTGAATGACAAG	1578
녹 효	422	Herfeilismer SerlæulfeinladsphalæudluvalvalmernlathrtyrSermg Herfeilittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillittillit	441 1638
독용	442	Ser Thr Ser ClinasnikenaspSer GlyThr Asplice Ser PheProTrp Leileuasnval	461 1698
*	462	LeuAsnLeuLysA	

qn	_	CTTAATTTAAAAGCCTTIGATTITTACAAAGIGATCGAAAGITITATCAAAGCAGAAGAGC 1758
ò		AsnLeuThrArasluMet HeLysHisLeuGluAraCyssluHisAraHeMetGluSer 501
qa	-	AACTTGACAAGAAATGATAAAACATTTAGAAGGATGTGAACATGGAATGATGGAATGC 1818
ΟŸ		502 LeuAlaTrpleuSerAspSerProLeuPheAspLeuTletyschuserTysAspArachu 521
qn	-	CTTGCATGGCTCTCAGATTCACCTTATTGATCTTATTAACAATGAAAGACGGGAAA 1878
ò		GlyProThrAspilistenGluSerAlaCysProLeuAsnLeuProLeuGluAsnHis 541
qu	-	GGACCAACTGATCACCTTGAATCTGCTTGTTGTTGTTGCTCTCTCT
ò		ThralaalaaspMetTyrLeuSerProValArqSerProLysLysClysGlySerThrThr 561
qa	_	ACTGCAGCAGATATGTTTTTTTTTTTTTTTTTTTTTTTT
ОУ		ArgValAsnSerThtAlaAsnAlaGluThrdInAlaThrSetAlaPhedInthrdIntys 581
đ	1	CGTGTAAATTCTACTGCAAATGCAGAGACACAAACACAGAGATTCCAAAACCAGAAA 2058
ŝ		ProLeuLysSerThrSerLeuSerLeuSPrLyrLysLysValTy1ArqLeuAlaTyrLeu 601
qu	2	CCATTGAAATCTACCTCTCTTTCACTGTT TTATAAAAAACTGTATGGGTTAGGTTA
ζŞ		ArgleuAsnThrLeuCysGluArgLeuLeuSerGluHisProGluLeuGhuHisHeHe 621
qq	2	POGETANATACACTTESTSANCOCCTTCTGTGTGTGTCTGTTTTTTTTTTTTTTTTTTTT
οy		TrpThrLeupheClaHisThrLeuCinAsnGluTyrCluLeuMetArqAspArqHisLeu 641
đ	∾ .	TGGACCCTTTTCCAGCACACCCTGCAGAATGAGTATGAACTCATGAGACACAGCATTTG 2248
ογ		AspGln1leMetMetCysserMetTyrGly11eCysLysValLysAsslleAspLeuLys 661
90	7	GACCAAATTATGATGTTGTTGTTGTTGTTGTTGTTGTTGTTGTT
δ		PheLysllelleValThrAlaTyrLysAspLeuFroHisAlaValGlnGluThrPheLys 681
qq	~	TTCAAAATCATTGTAACAGCATACAAGGATCTTCCTCATGCTGTTCAGGAGACATTCAAA 2358
οy		ArgValleufletysGluGluGluGluTyrAspSerTletleValPhetyrAsnSerValPhe 701
ad	7	CGTGTTTGATCAAAGAAGAGGAGTTGTATTATATGTATTGTATAAGTTGTT
Ċλ		MetGloArgLeuLysThrAsolleLeuGlaTyrAlaSorThrArgFraFrathaLeuSer 721
10E	21	ATIGCAGAGACTICAAAACAAATATTTTGCAGTTTCCACCAGGTCCCTTACCTTGTCA 2478
ço		ProlleProMisileProArdSerFroTyrLysPheProSerSerProLeuArq11ePro 741
ď	2	CCAATACCTCACATTCCTCGAAGCCCTTACAAGTTTCCTAGTTCACCTTACGTTCCT 25.88
οy		GlyClyAsalleTyrfleSerProteutysSerPrefyrtysTeSerGlactyteuPro 761
ąa	2	GGAGGGAACATCTATATTCACCCTGAAGAGTCCATATAAAATTTCAGAAGGTCTGCCA 2598
δ		ThrProThrLysMetThrProArgSerArgIleLeuValSerIleGlyGluSerPheGly 781
an .	7	ACACCAACAAAAATGACTGCAAGATCATAAGTTTTTTTTT
ζ		ThrSerGlaLysPheGlnLysIleAsnGlnMetValCysAsnSerAspArqValLeaLys #01
वेत. •	7	ACTICTGAGAGGTTCTGGAAAAAAAAATCAGAGGGTAAAAAAAA
, .		ArgserAlaGluGlySerAsnProProlysProteutystysteuArgrEedsp116Cla #21
DE	7	AGAAGTGCTGAAGGAAGCAACCTCCTAAACCCTGAAAAATTAGSCTTGAAGTGAA
ç		GlyserAspidluAlaAspidlyserLysHisLeuProGlystaSerLysPhechichalys 841
đa	7	GGATCAGAIGAAGCAGAAGIAAAGAICICCCAGGAGAGTCCAAAITICAGCAAAA 2838

학 출	842 2839	LendlastumetThrSerThrArgThrArgMetGlnLysGlnLysMetAsnAspSerMet 861
के <u>ब</u>	86.2 29.95	Aspinserasolyschudlulys 869
RESULL 5 181465 DOUS DETNITON ACESSION VERSION KEYWORDS		181465 2 from patent TS 9710255. FRI465.1 G1:3209762
REFERENCE JOHNNE JOHNNE JOHNNE JOHNNE REATURES ROUTE	ORGANISM ORGANISM SPERENCE AUTHORS 1011E JOURNA: SATURES	Unknown. MUNDADOWN. MUCLasslied. B. 1 (bases 1 to 2994) S. Skepard, H. Michael. and Wen, S. Fen. Characterization of a novel anti-pll0.sup.KH monoclonal antibody Patron. 48 = Pingre. A 2 PM-1998; Localion/Qualitiers Free 1 . 2994
HASI .	=	/Organism="inknown" 974 a 618 c 1503 g 800 t
Alidoment S Pred. No.: Score: Percent Sim Hest local Coery Match	Menut No. 1000a Mata	Aliquament Scores: 9.84e 312
1S = 5		26-459A-47 (1-869) x I81465 (1-2994)
स् स्	- 139	Morth outrolysthichergrysthicalaalaahaalaalaalaalaalaastupro 20
ág g	21	ProAlaProProProProProProGluGluAspProGluGluAspSerGlyProGlu 40
दे है	4.52	AspleabroleuValArgLeuGluPheGluGluThrGluGluProAspPheThralaLeu 60
ξ, ά	61 419	CyschniysLeutysHebroaspHisValargGidargAlaTrpLeuThrTrpGluiys 80
λς Q	81 474	ValSerSerValAspGlyValLeuGlyGlyTyrIleGlnLysLysLysCluLcuTrpGly 100
7. A	101	IlecysliePheileAlaAlaValAspLeuAspGluMet.SerPheThrPheThrGluLeu
소 <u>유</u>	121	Offitysash Leolud i eScrValdisiysphePheAshleuLudglulleAspthr 140 7
ধ্ র	141 559	SerThriysValAspAsnAlaMetSerArgLeuLeuLysLysTyrAspValLeuPheAla 160
<i>≳</i> ;	4	LouPheSerLysLauGluArgThrCysGluLeuIleTyrLeuThrGlnProSerSer 180

d d	619	CTCTTCAGCAAAT163AAAGGACTGIGAAC11AIAIAIIIGACAAAAGGAGGAGTTCG	æ/ 4
ΟŸ	181	Met	181
90	679	ATATCTACTGAAATAAATTCTGCATTGGTGAAAAGTTTCTTGGATCACATTLTTALTA	7.38
ογ	181		181
qq	739	GCTAAAGGGGAAGTATTAGAAATGGAAGATGTGTGTGTGT	85.
ΟŸ	181		$\widetilde{\Xi}$
D D	799	TGTGTGGTTGACTATTTTATTAAACTCTCACCTCCCATGTTGCTCAAAGAACCATATAAA	858
ΟY	82	ValAlaValIleProlleAsnGlySerProArgIhrProArgArgGlyGlnAsnArgSer	701
qq	859	ACAGCTGTTTATTATCTTTTTTTTTTTTTTTTTTTTTTT	2. 80
ŝ	505	AlaArgIleAlaLysGlnLeuGluAspAspThrArgIleIleGluValLeuCypLysGlu	221
40	J J	GPANGRATAGNAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	826
	979	E18C1uCjsAsniluAsp2luValigsAsnValigithcigsAsnilanlinininini 	241 1038
ã	24.2	AsnScrLcuCl7LcuValThrSerAsnCl7LcuProCluValCluAsnLcuSerLysArd	261
qn	1039		10.5
Ę,	362	TyrGluGluIlCTyrLeuLysAsnLysAspLeuAspAlaArqLeuPhcLeuAspHioAsp	281
qc) 1044	TAGGARGAARTTATTTTGGALGATGTAGATGCAGATTATTTTTGGALGATGAL	1158
5 3	285 1.082	LysThricuGinThrAspSertieAspSerPheGlunhrGlnArgThrProArgTysSer [1][1][1][1][1][1][1][1][1][1][1][1][1][101
0	302	ASHLOHASDG ING INVA LASHVA LI LOPENDE SELECTOR AND AND MAKASEN ASSENTANCE.	7 7
qqq	1219	AACCTTGATGAAGGTGAATGTAATTCCTCCACACTCCAGTTAGGACTGTTATGAAC	1278
οy	322	ThrileClnGlnLeuMetMetIleLeuAsnSerAlaSerAspGlnProSerGluAsnLeu	341
qu	1279	ACTATICGAGAATTAATGATGATTTTAAATTCAGCAAGTGATGAACCTTCAGAAAATCTG	1338
022	342	1!cScrTyrbeAsnAsnCysThrVa!AsnProUysJiuScrI]cLcutiysArqVallys	361
qq	1339	ATTCCTATITIAACAACIGCACAGGGAATCCAAAAGAAGTAITCTGAAAGGAAGGAGGAAG	1398
Oy Dp	362	ASPITECTYTYTIOPHOLYSCICLYSPHOATALYSATAVATOLYCTSVATGLU 	381
ò	c or e	T]eS]ySerGlaArTyrEySLeuGlyVa.AraLeuTyrEyrAraVa]MeGluSerMet	
90	1459		1518
ΟŸ	402	ToulysSerCluCluCluArglouSerfleClnAsnPhcSeriysLculcuAsnAspAsn	5 .
qq	1519	CTTAAATCAGAAGAAGAACGATTAATCCATTCAAAATTTTAGCAAACTTCTGAATGACAAC	1578
03.	1579	422 HephelismetSert.cut.cuAacysAlat.cuChuVatVaimetAiaThrtyrserArg 441 	441 1638
ςò	442	SerThrSerGlaAsaLeuAspSerGlyThrAspLeuSerPheProTrpIleLeuAsaVal	461
qu	1639	AGTACATCTCAGAATCTTCATTCTGGAACAGATTTGTTTTTTTCCCATGGATGTG	1598
δλ.	462		4.8
qq	1699	CTTAATTTAAAAGCCTTTGATTTTACAAAGTGATGGAAAGTTTTATCAAAGAAGC	1758

```
742 OLDVILDAG LOUPT LOSOTEG COURS SOFTET STRESSE FOR A TOTAL STRESSE STRESSE AND TOTAL STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE STRESSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1939 ACTOCASTASTATOTATION OF THE PRODUCT OF ANGARAMANA ASSET OF A 1938 ACT OF ASSET OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF A 1938 ACT OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HITTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTELLETTEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1259 AACTTGACAAGAGAAALGAFAAAACATTTAGAAGGATGFGAAGATGAAATCATGGAATCC 1818
                                                                                                                                                                                                                                                                                                                                                                                                          HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH HITTH 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2659 ACTICIGAGAAGITCCAGAAAATCAAGAGGIGGIATGIAACAGGGGACGGTGTGTCAAA 2718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2299 ITCAAAATCATTGTAACAGATACAAGATCTTGCTCATGCTGTTCAGGAGACATCAAA 2358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          782 hrsərdən;ysthediniystləAsadlaMərtValOysAsaSetAspArqValLeuliys 801
                                                                                                                                                                                                                                                                                                                             502 LeuAlaTrpLeuSerAspSerProLeuPheAspLeuTletysGInSerLysAspArgGlu 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  522 dlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuProLeuGlnAsnAsnHis 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     562 ArqValAsnSerihrAlaAsnAlaGiuThrGlnAlaThrSerAlaPheGlnThrGln,ys 581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            622 TrpDhilombheolaHis/briceGlnAshGlmTyrGlmLeuMetArqAspArgHishau 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                662 PhotystletleValthrAtatyrLysAsptenProHisAtaVatdtneTufbrPhetys 681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  702 MetGlnArgLeuLysThrAsnIleLeuGlnTyrAlaSerThrArgProProThrLeuSer 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   76.2 ThrProThiLysMetThrProArdSerArdIleLeuValSerIleGlydluSerPheGly 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            822 ClySerAspOlaAlaAspOlySerLysHisLeuProOlyOluSerLysPheClnClnLys 841
482 AsmiruthrangdiuMettleGysHishenGluArqCysGluHisArqIleMetGluSer 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        602 ArdikuAsnihriku/ysdinArdikuikuSordiuHisproGlukandiuHisiletle 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             682 ArqValleulletysGluGluGlufyrAspSerllelleValPheTyrAsnSerValPhe 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               542 ThrAlaAlaAspMetTyrLeuSerProValArqSerProLysLysLysClySerThrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \frac{28}{5}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>:</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 â
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \frac{8}{5}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \frac{5}{5}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \tilde{z}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \hat{\Xi}
```

```
VRLEFEETEEPDFTALGOKLKI PUNIVREKAWITWEKVSSVLGVIGGY I ÖKKKELMRIC
I FIAAVULDEMSFTFTELGKNI EI SVIKFFNILKE I DTSTKVUNAMSRLLKKYIVILFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TESKTERTCELTYTT OPSSSTSTETNSALVLAVSWITETLAAGEVLOMEDITY SPOL
MLCVLDYFTKLSPEMILIKELYALAVIETNGSEKTPROGENSAKTAKULENDIKTTEV
LCKEBECNTDEVKNYYFKNETPFMISIALVISNGTAFVENILSKRYEELYLAKKILIAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LFLDHDKTLQTDSIDSFETQRTPRKSNLDEEVNVIPPHTPVRTVMNT1QQLMM11.NSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RLYYRVMESMLKSEEBERLSTONFSKLLNIN IFHMSLIACALEVVMATYSRSTSGNLDS
GTDLSEPWLLINVLNISKALDEPKNELESTRAEDNLI REMIKHLERCEHRIMESLAMLSD
SPLEDLIKOSKDREGOTDHLESACPUNLEGONNHTAADMYLSPVKSFKKKGSTIRVNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TANAETGATSAFÜTGKPILKSTSTSLEVRKVYRLAYLKLULGEBLISBHPELEHTUM
LEQHTLGURYELMRORILLDGIMMCSMYGTGRORUTGIRFRITYTAYRGILPHAVDETFR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 2994)
Lee,W.H., Shew.J.Y., Honq,F.D., Sery,T.W., Domoso,L.A., Younq,L.J.,
Bookstein,R. and Lee,E.Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /translation-"MPPKTPRKTAATAAAAAAEPPAP!PPPPFEHPPQDSGPEDLPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOQPSENELSYENN TVNPKESTLARVED GY DEKEREAKAV 900°VET GSORYKLOV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RVLIKEBERDSIIVFYNSVFMQKLKINILQYASTRPFILSF1PHIFFKSPYKFFSSPLR
IPGGNIYISPLKSPYKLSEALPIPIPMIPPSPIIVSFGFSPYTSPYPQFINGMYTRSF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RVIARSABGSNPFREI KRIJKED I EGSDEADGSRHIJFGESKEGGATAEMISTET RMURG.
KRNDSMD FSNKEER."
                                                                                                                                                                                                                                                                                                                                                                                                                           Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi,
                       Human retinoblastoma susceptibility protein mRNA, complete eds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /map-"xp22.32;ypll.3"
/cell_line-"retinoblastoma cell line Y79, and normal
retinoblastoma cell line"
| ...tssue_type-"retinoblastoma"
| ...2994
                                                                                                                                                                                                                                                                                                                                                 retinoblastoma protein; retinoblastoma susceptibility protein.
Homo sapiens retinoblastoma cbNA to mkNA.
842 LeualadlumetThrSerThrArgThrArgMetGlnLysGlnLysMetAsnAspSerMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The retinoblastome süsceptibility gene encodes a nuclear phosphoprotein associated with DNA binding activity Nature 329 (6140), 642-645 (1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note-"retinoblastoma suceptibility protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
                                                                                                                                                                                                                                                      mKNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HO9 +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xret="GDB:G00-120-184"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /protein_id="AAA69808.1"
/db_xref="G1:190963"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .2994
/organism="nomo-sapiens"
                                                                                                                                                                                                                                                      2994 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       543 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualitiers
                                                                                                                             2899 GATACCTCAAACAAGGAAGAAA 2922
                                                                                                   862 AspIhrSerAsnLysGludluLys 869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /codon_start-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /qene-"MIC2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /dene-"MIC2"
                                                                                                                                                                                                                                                                                                M28419.1 G1:190962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4454.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94,538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       و18
د
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98.948
                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  974 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          88014238
3657987
                                                                                                                                                                                                                                                   HUMRBSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Source
                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PURMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                 RESULT 6
                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                            HUMRBSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                LOCUS
                                               qq
                                                                                                   ŝ
```

US-09-026 454A-47 (1-859) X FUMRBSA (1-2994)

	1.89	Mot Probrolysthr ProArquysthrala Alachralaa 	20
	64	ProAlaProproproproproProProCloCluAspPeGluGluAspSetGlyProGl	0
^	24.5	COGGRADOSCOCOCOCOCOCOCOCOCOCOCOCOCOCOCOCOCOCOC	258
		AspteuProLeuValArgLeuGluPheGluGluThrGluGluProAsp	09
_	J.	GACCTOCCTCGTCAGGCTTCACTTTCAAGAAAAAAAAQAACTGATTTTTACTGCATTTT	
	1.	CysGlatyst.cut.ysTleProAspHisVaTargGluArgAL 	80 378
	T	ValserServalAspGlyvalLeuGlyGlyTyrtleClnLystysLysGlu	0
^		GTTTCATCIGGACGGAGTAFFGGGAGGTTATTCAAAAGAAAAAGGAACTGTGGGG	m
. ^		IleCys11ePhe11eAlaAlaValAspLeuAspGluMetSe - - - - - - - - - - - - - - - - - - -	2 6
	1.21	CINIYSASETTCGTUTTCSCEVATHISLYSPACPHEASHCUTA TITLITITITITITITITITITITITITITITITITITI	140
		Set 1141 jsValaspAsnalaMetSerargLeuLeuLysLysTyrAspVall.cuPh	9
_	98.2	AGTACCAAACTTCATATGCTATGTCAACACTGTTGAAGAAGTATGATGTTTGCA	618
	161 619	LeuPheSerLysteuGludrgThrCysGluteutleTyrLeuThrGlupr +++++++	180 .
	18	Met	181
	67.6	::: ATATCTACTGAAATAAATTCTGCATTGGTGCTAAAAGTTTCTTGGAATCACATTTTTATTA	138
	ī		181
_	5 \$ 6	GCTAAAGGGGAAGTATTACAAATGGAAGATGATGTGGTGATTTGATTTTCAGTTAATGCTA	198
	181		181
	ار ا ا	FGTGTDCTTGACTATTTTALLAAACTCTCACCTCCCATGTTGCTGAAAAAAAAAA	828
	182 859	ValalavalitetrolleassGlySerProargfbrProargargClyGlsasnArgSer 	201
	202	Alaatq1tcAlatysc*ntcvcTuascasptbrarg11c11cG15V911c9CystysG1g	221
	<u>.</u>	GCACGGA FAGCAAAACAACTAGAAAATGA FAGAAGAAT FA FFGAAG FFCFCFG FAAAGAA	978
	277	HissineysAsolleAspGleValLysAsoValTyrPheLysAsoPheTeProPheMetilitititititititititititititititititit	241 1038
, .	242	AsnSert.cuGlyt.cuValThrSerAsnGlyt.cuProGluValGluAsnLcuSert.ySArg	
		WITCH COMPLETE AND THE TAKE OF THE COMPLETE COMPLETE TO THE TAKE OF	9 5: :
	262	PTGPGPUTCHTTHTTHTHTHTHTHTHTHTHTHTHTHTHTHTHTHTH	281 1158
	282	LysthrLeuglpThrAspSerIleAspSerPheGluThrGlnArgThrProArgLysS	010
_	Ġ	AAAACTCTTCAGACTGATTCTATAGAGAGTTTTGAAAGAGAGAG	1218

321	341	361	- 8 - 8	1458	401	421	1578	441	461		1758	501	1818	1878	541	1638	. 561 : 1998	581	2028	109	2118	621	541	2238	661 2298	0 0
rValMetAs TGTTATGAA	rGluAsnLe FILLLILL AGAAAATCT	SArqVally 	7078Va161	TGTGTGA	tgluserMe 	uAsnAspAs	GAATGACAA	rTyrserar ++++++ ATATAGCAG	eLeuAsnVa	10.10AA1G1	SALAGIAGI 	eMetGluSe	CATGGAATG	GGACCGAGA	nAsnAsnIII	GAATAATCA	yserthrih IIIIIIII ITCAACIAC	LTLEGIBLY	GACCCAGAA	.AlaT/rLe	AGCCTATCT	UHISTIC:	pAraHisLe	CASSCALL	PASPLOULY	n in he pholis
ovalargfh HIIIIIII SAGTTAGGAC	spGlnProSe 	erileteuty Fillilitit	101701nCl	GGGACAGGG	rArgValMe 	erLysLeuLe	SCAMACTICI	alMetAlaTh 	neProTrpIl	CCCATGGAT	STTTATCAA	uHisArg	VACATOGAAT	ACAATCAAA	euProteuG1	HOCTOLOGA	rst.yst.yscl	erAlaFheGl	AGCCTCCA	llyrArate	GTATCGGCT	-ocluresc1	euMetArαAs	CATGAGAGA	allysAssil 	avalgingi
roffsthre HIIIIII CACACACIC	eralasera. TITITIT GAGGAAGTG	rolysgluse	algsAlaV	CTAAAGGTG	rgleulyrl 	laAsaFheSe	AAAATTTTA(cuclevalva 	SpLeuSerP	A112010114	TGATCGAAAC	luArgCysG	AACGATGTG	ATCTTALTA	rcLeuAsnLe	CICIINAIC	rgSerProly 	lnAlaThrSe	AAGCAAGCTG	7rL/3L/3V	ATAAAAAAG	erGlastish 	luTyrGlube	HILLIIII AGTATGAACT	lec;s_ysv; 	cultodisA
ValifeProF HIIIIIIII SIAAIICCIC	IleLeuAsns ATTTTAAATT	ThrValAsnF 	31u1.7sPhcA	SAGAAATTTG	LeuGl;ValA 	SeuSerileG	TATCCATTC	AlaCysAlai HIIIIIIII addiananin	SerGlyThrA	oboto transfer and		ysHistend	AAACATTTAG	CTTTATTTO	SerAlaCysF	019011910	SerProvalA 	MaGlaThro	 	SerieuFher	PATGITT	Argleuleus	JeuGlnAsnG	TGCAGAATG	4etTyrSlyf 	TYTLYSASPL
GluvalAsn' HIIIIIII GAGGTGAAT	Leumet.Met. 	AsnAsnCys: 	HePhetys(ATCTTTAAA	ArgTyrLys) Gatacaaa	GluGluArq]	GAAGAACGAC	Sericulcu/ 	AsnLeuAsp8	Tope of decir	Alarienspi 	Glumet []e[GAAATGATAA	TCAGALTCAG	Histerdles	CACCITGAA	MetTyrLeus 	ThrAlaAss2	ACTOCAAATO	Thrserler	Accimination	LeaCysclu/ 	GlenisThrI	TTTTTTT CAGCACACCC	Metiysser 	Valthrala:
302 AsnicuaspCluGluValasnValHebroProHisTh/ProValArgThrValMcrasn 321 	rilegingin 	eSerTyrPhe IICCTATTTT	P:12c1yTyr	TATAGGATAC	eGlyserGln [[[[]]]] rGGATCACAG	uLysSerGlu	TAAATCAGAA	erheHisMet TTTCATATG	rThrSerGln		UASELEULJS TAATTTAAAA	nLeuThrArg	CT IGACAAGA uAlaTrofeu	TGCATGGCTC	YProThrAsp	AFFAAFTGAT	rAlaAlaAsp 	qValAsnSer	TGTAAATTCT	Olembys Ser	ATTGAAATGT	J.CuAshihr 	pThrLeuPhe	HTTTTT GACCCTTTTTT	pglnileMet 	crysileile
2 As	2 Th	2 11 9 AI	SA	¥5 6	2 III	. Le	- 6	2 AT	S - S		3=5	2 As	V C	= 5 - 5	5 E	5 . 5 .	2 5 E = 5	2 Ar	ا ال	77	5	2 Ar	Tr.	_£	2 A3	. E
30	32	34	36	139	38	40	151	1579	44	- W	1691	4 i	ν <u>(</u>	181	525	187	54 193	5.6	199	g.	205	500	629	217	54.	
Oy Db	9. 0.0	ð 13	Οy	QQ	ćo qo	ó	qq	ර් සි	ô á	3	S da	oy a	<u>a</u> 3	qu	ó í	g0 .	O _Y	65	QQ	ζō	QQ	0 y	ô	qq	6. qq	6